National Evaluation of Home Improvement Services

In partnership with:

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About us

Centre for Ageing Better

The UK's population is undergoing a massive age shift. In less than 20 years, one in four people will be over 65.

The fact that many of us are living longer is a great achievement. But unless radical action is taken by government, business and others in society, millions of us risk missing out on enjoying those extra years.

At the Centre for Ageing Better we want everyone to enjoy later life. We create change in policy and practice informed by evidence and work with partners across England to improve employment, housing, health and communities.

We are a charitable foundation, funded by The National Lottery Community Fund, and part of the government's What Works Network.

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Prepared by:

Jamie Brown Graduate Consultant, **Siôn McGregor** Senior Consultant, **Molly Mackay** Consultant Researcher, **Susie Margoles** Senior Consultant

Date 28/05/2024

Authorised by:

Ed Suttie Position Head of Consultancy

Date 14/06/2024

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1.1 Introduction to home improvement services

1.1.1. Definition

Home improvements (also known as 'home adaptations') refer to all kinds of physical changes, modifications and assistive devices that can be put in place in a home to support healthy ageing (McCall et al, 2023).

1.1.2. What are home improvements?

Home improvements include both minor and major adaptations. The most common of these are minor adaptations. Examples of minor adaptations include handrails, ramps, lighting improvements, heating controls, key safes, and monitoring equipment for individuals with health conditions such as dementia (Centre for Ageing Better, 2017). These adaptations typically cost under £1,000 (Centre for Ageing Better, 2017). By contrast, most major adaptations cost £1,000-£10,000, but the cost can rise to upwards of £30,000 in some cases (Curtis and Beecham, 2018). Examples of major adaptations include the provision of level access to showers and wet-rooms, alterations to room layouts, toilet replacements and stair lifts (Centre for Ageing Better, 2017).

1.1.3. Why are home improvement services needed?

Recent evidence (Centre for Ageing Better, 2023b) highlights that over 600,000 homes are in disrepair, whilst many more homes in England, approximately 3.5 million, fail to meet the Government's Decent Home Standard. These homes pose a risk to inhabitants' lives, with around 10 million people living in cold, damp or unsafe housing. Older people, particularly those living in the private rented or owneroccupied sector, are more likely to reside in a home that poses a risk to their health and to have their health conditions adversely affected by poor quality homes.

Home improvements are therefore vital for older people to maintain healthy lives and for local and national governments to avoid a health crisis (McCall et al, 2023). Whilst many people will maintain good health for much of their later life, the likelihood of having one or more long-term health complication, disability or physical impairment increases with age. 16% of 65-year-olds will have difficulty undertaking at least one basic activity of daily living, increasing

to roughly half of those at 85 years (Marmot et al, 2016). There is also a "two tier experience of ageing" (Jones, 2007). This means those in good health with greater cash and resources, through larger pensions or available equity via home ownership or inherited wealth, are likely to live longer lives with a higher quality of life. Those who require state support with income, housing or social care are likely to experience a lack of access to quality services, with longer waiting times and delays before receiving assistance.

1.1.4. What are the benefits of home improvements?

There is evidence to suggest that home improvements are an effective and cost-efficient intervention to prevent falls and injuries for older people (Keall et al, 2015), improve beneficiaries mental health (Heywood, 2004) and improve their performance of everyday activities (Powell et al, 2017). Adaptations also tend to result in older people feeling safer and more comfortable in their homes (Tanner et al, 2008), supporting people to live longer in their communities (Hwang et al, 2011). The contribution of these impacts can result in the saving of monetary and labour costs to the health and social care sectors in the UK (Powell et al, 2017). Home improvement services are found to reduce care home admission rates (Hollinghurst et al, 2020), hours of in-home care needed (Carnemolla and Bridge, 2019) and emergency fall admissions (Keall et al, 2017), resulting in beneficial monetary and social values. However, there remains an evidence gap around the availability and impact of home improvement services. To address this gap, a wider evaluation[1] is being carried out by CRESR/SHU in conjunction with University of Sheffield, University of Stirling, Foundations, and BRE which will further explore ways in which home improvement services are evaluated, and how they demonstrate their benefits.

1.1.5. Headline Figures (EHS 2018-2019)

These headline figures from the English Housing Survey (EHS) demonstrate the importance of home improvements services, as a large number of households in the UK are led by an older person and a high proportion of older people live alone.[2]

- Over a quarter (29%) of all households were led by someone aged 65 or over – 6.9 million households in total.

- Older people are more likely to live alone. 45% of households led by someone aged 65 or over were single-person households, more than twice the rate in younger age groups. Over 3.1 million adults aged 65 and over lived alone in 2018-19. The majority of these single adults were women (2.1 million, compared with 1.0 million men living alone).

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1 Home Improvement Services in England – National Evaluation | Sheffield Hallam University (shu.ac.uk)

2 https://commonslibrary.parliament.uk/research-briefings/cbp-9239/

- The majority of older households are owner-occupiers. 5.42 million households (79%) led by someone aged 65 or over were owner-occupiers in 2018-19. 1.09 million were social renters (16%), and around 380,000 were private renters (6%).

1.2 History of Home Improvement Services in the UK

1.2.1. The Rise of Home Improvement Services and 'Ageing-in-Place'

Policies concerning 'ageing-in-place', meaning to provide support and resources to help a person remain living in their own homes and community settings (Sixsmith et al, 2014), have increased in prevalence significantly in the 21st century (Vasunilashorn et al, 2012). This contrasts with the previous rhetoric of ageing with social care which had been dominant in the UK in the second half of the 20th century (Jones, 2007). Policymakers were drawn to the possibility of financial savings in comparison to social care (Sixsmith et al, 2014). The change in trend suited many elderly people who often wished to remain in their home and maintain their independence (Wiles, 2005). Since then, most local authorities in the UK have introduced home improvement services. Home improvement agencies in the councils of Middlesbrough (Centre for Ageing Better, 2018), Oxford (Oxford City Council, 2022) and Somerset (Somerset Independence Plus, n.d) are noted as offering particularly comprehensive services.

1.2.2. Grants and Frameworks

The Disabled Facilities Grant (DFG) provides funding to older and disabled people in owner occupied, privately rented and registered provider properties. The grant is designed to help people make changes to their home environment, such as the installation of showers, stairlifts and ramps (Mackintosh and Leather, 2016) to improve the quality of life and extend the time they can remain in their own home. The grant was first introduced with the Housing Grants, Construction and Regeneration Act 1996. In 2014 the DFG became part of the Better Care Fund, a pooled health and social care budget. The DFG has been allocated £625 million for the 2024/25 financial year (Foundations, n.d).

More recently, the Technology for our Ageing Population Panel for Innovation (TAPPI) report captured evidence and examples of innovative use of technology solutions across housing, health and social care to enable older people to live independently and well at home (Beech and Porteus, 2021). The report made several recommendations related to the use of technology to improve healthy living at home. These included establishing a clear benchmark outlining the needs to live well and safely in a digital society known as a 'Minimum Digital Living Standard'. The report also recommends updates to policy, guidance and regulation concerning smart technology infrastructure and futureproofing the DFG grant with a new 'Technology Facilities Grant'.

Generally, over the last decade funding for home improvements and housing renewal has been cut. A recent AB report suggests that some £2.3 billion of funding for grants has been withdrawn over this period (Centre for Ageing Better, 2023b). Evidence gathered during the scoping phase of the evaluation indicates that the loss of ring-fenced Supported People programme funding and other specific funding for handy person services has impacted home improvement services. The loss of ring-fenced funding, the financial crash, and increased pressure on housing associations to concentrate on making profits by building new homes has resulted in a reduction in the number of home improvement agencies and more services moving back in-house to local authorities.

Many more traditional services now focus on DFGs as this is where the funding is available. Services are also often linked to hospital discharge as funding comes through the Better Care Fund for this kind of activity.

1.3 Current Issues and Challenges Facing the Sector

Despite the numerous benefits and shifting trends, many key challenges and issues remain in the integration of home improvement services in the UK. The effectiveness of services offered by local councils are limited due to underfunding (McCall et al, 2022). Additionally, the government fails to give clear guidance to local councils (Mackintosh and Heywood, 2015), resulting in a fragmented policy landscape in which available grants and home improvement services remain location dependent, likened to a 'postcode lottery' (McCall et al, 2023). Resulting from these inconsistencies and lack of available finance is an ineffective and inefficient home adaptation service process (Zhou et al, 2019) which forces many residents to self-finance their home improvements (McCall et al, 2023). This cost can act as a deterrent for some households (Powell et al, 2017). Additionally, the perceived stigmatism associated with decline and vulnerability can cause residents to delay accessing home improvements (Bailey et al, 2019). This, combined with a lack of awareness of available services (McCall et al, 2023) and the financial cost, results in many older people delaying the installation of home improvements until they reach crisis. Evidence suggests that delays in installation of home improvements can reduce their effectiveness (Petersson et al, 2009; Powell et al, 2017). The above points suggest a more consistent and coordinated approach is needed by local councils, one that is better funded and raises awareness of available services and the benefits to residents and councils of home improvements. Evidence gathered during the evaluation scoping phase suggests that 'blended' service provision can work, for example by using commissioning arrangements or formal partnerships with the voluntary and community sector. Such joined up working can help overcome barriers that exist for home improvements services such as a lack of local authority resources.

In addition to the financial, political and social challenges, the poor designs of

some home adaptations is leaving them not-fit-for-purpose and not aesthetically pleasing (McCall et al, 2023). Furthermore, the physical features of UK homes can make them difficult and costly to retrofit (Mallaband et al, 2013). These factors, combined with a lack of evaluation and post-adaptation visits (McCall et al, 2023) can result in the under performance of adaptations. Evidence suggests that the greatest outcomes are achieved when all relevant stakeholders are closely involved in the decision-making process (Powell et al, 2017). This can ensure that adaptations are fit-for-purpose so they can be effective in the context of the specific house and support the needs of the individual(s), whilst working closely with the older person(s) concerned to help them to overcome stigmatism.

1.4 Models of Home Improvement Services

To overcome challenges some models have been proposed. One of these is the 'Inclusive Living' model (McCall et al, 2022). This model aims to overcome challenges of poor-quality homes, disinvestment in repair and maintenance, and the fragmented policy landscape and funding surrounding home improvements. McCall et al (2022) propose three pillars concerning (1) Physical Space and Design (2) Connections and Relationships and (3) Social Inclusion and Equality. The Inclusive Living model encourages proactiveness from policymakers to overcome negative stigma and emphasises the importance of framing home adaptations as a public issue rather than a private one, overcoming social inequalities in the process where many older people are unable to maintain or adapt their homes despite a desire to do so.

In July 2023, the Centre for Ageing Better published a report titled "Building effective local home improvement services" (Centre for Ageing Better, 2023) to advise local areas on how to build an effective and comprehensive one-stop shop service for local areas. The report proposes the 'Good Home Hub' model which highlights five key elements that should be offered for a good service. These are:

1. Independent information and advice
2. Independent home assessment
3. Practical support throughout the process
4. Targeted financial support: grants, loans, and other financial products (including DFGs)
5. Signposting to trusted traders

The evaluation Call for Evidence also highlighted some key features of an ideal home improvement service which will be explored. These include:

1. A case worker-led approach
2. Fast referral processes and simple eligibility criteria
3. Integration across providers and strong partnerships working across sectors
4. Well-staffed with minimum qualifications for staff

5. Fair and affordable finance options for clients and long-term and stable funding for services
6. Consistent minimum services across areas, but the ability to evolve and adapt to meet different local needs
7. A person-centred approach i.e. keeping in mind the person at the heart of the work

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2. Work Package 2 – Cost of Poor Housing to the NHS Among Older People

For the purpose of this analysis "older people" refers to homes with a household reference person (HRP) aged 55 or older.

Table 1 shows the number of homes for those with a HRP aged 55 or older that are defined as 'poor housing', having one or more Housing Health and Safety Rating System (HHSRS) Category 1 hazards. It gives the approximate total costs to repair each of these hazards as well as the total repair cost to mitigate all poor housing so that the risk of harm in these homes is no worse than the national average for the age and type of home. Table 1 also provides the savings to the NHS if these hazards were mitigated; as well as the estimated payback in years of fixing the hazard.

The key findings are:

– Around 1.2 million homes (11%) with an HRP aged 55 or older have at least one Category 1 HHSRS hazard in 2018/19; it was around 1.1 million (10%) in 2016/17, highlighting there has been no improvement in the proportion of these households living in poor housing[3]

– 11% of older households (those with a HRP aged 55 or older) lived in a home with a Category 1 HHSRS hazard, compared with 9% of other households in 2018/19, Table 2 and Figure 1.

– These homes with a HRP aged 55 or older, with a Category 1 HHSRS hazard, cost the NHS around £595 million for the first-year treatment costs only; an increased burden since this was last reported in 2016/17 reflecting increased health treatment costs, Table 1.

– There has been no improvement in the number of households with a HRP aged 55 or older living in the coldest homes since this was last reported in 2016/17, despite the overall improvement in energy efficiency across all housing. (The number of homes for those with a HRP aged 55 and older with excess cold was 427 thousand (4%) in 2016/17 and was 440 thousand (4%) in 2018/19).

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3 Home and dry: The need for decent homes in later life | Centre for Ageing Better (ageingbetter. org.uk)

– In 2018/19, households with a HRP aged 55 or over were more likely to live in a cold home compared with those with a younger HRP (4% compared with 2% respectively), Table 3 and Figure 2.

– Although building costs would have risen over the 2016/17 to 2018/19 period, the average repair cost for these homes (of those aged 55 or older) defined as 'poor housing' was £3,875 in 2018/19, broadly similar to 2016/17 at £3,892. However, for many hazards there is considerable variation around this mean value in each survey year reflecting variations in the severity of hazards and the different types of work needed. Interestingly, the average cost to mitigate excess cold was £7,233 in 2016/17, while in 2018/19 this is £6,648. This may reflect different distribution in the types of energy improvements needed.

– For falls on stairs, some 417 thousand homes (4%) for those with a HRP aged 55 or older have this Category 1 hazard, and this had not changed notably since this was last reported in 2016/17 (420 thousand, or 4%).

2. Work Package 2 – Cost of Poor Housing to the NHS Among Older People

Table 1: Category 1 hazards for homes with a HRP aged 55 or older, with estimated repair costs and NHS health costs savings, 2018/19

Hazard	Number of homes with the Category 1 Hazard	Average cost per dwelling (£)	Total cost to mitigate hazard (£)	Savings to the NHS per annum if hazard mitigated (£)	Payback (years)
Excess cold	440,612	6,648	2,929,010,273	325,099,838	9.01
Falls on stairs	417,287	1,470	613,615,685	88,692,395	6.92
Falls on the level	187,221	1,017	190,463,422	55,925,887	3.41
Fire	80,987	4,124	333,951,594	44,008,711	7.59
Falls between levels	84,734	1,376	116,597,415	24,292,068	4.80
Hot surfaces	30,784	1,802	55,458,438	17,209,804	3.22
Lead	41,421	2,146	88,879,969	8,982,607	9.89
Dampness	13,386	3,796	50,807,985	6,974,061	7.29
Radon	48,806	1,443	70,417,617	5,757,070	12.23
Collision and entrapment	11,113	741	8,234,328	4,820,861	1.71
Food safety	18,507	3,267	60,467,056	3,921,639	15.42
Pests (Domestic hygiene)	12,709	3,539	44,971,519	2,633,470	17.08
Ergonomics	10,718	633	6,786,397	2,304,557	2.94
Sanitation (Personal hygiene)	9,947	564	5,608,247	2,109,206	2.66
Structural collapse	5,796	543	3,144,768	913,411	3.44
Carbon monoxide	2,475	633	1,567,114	471,420	3.32
Excess heat	2,439	633	1,544,320	326,546	4.73
Overcrowding	1,042	20,561	21,424,299	143,009	149.81
Electrical problems	0	0	0	0	0.00
Entry by intruders	0	0	0	0	0.00
Noise	0	0	0	0	0.00
Falls - baths	0	0	0	0	0
Water supply	0	0	0	0	0
Un-combusted fuel gas	0	0	0	0	0
Lighting	0	0	0	0	0
Explosions	0	0	0	0	0

Table Notes:
1. The total sum of all dwellings with Category 1 hazards will be less than the sum of the individual hazards as some dwellings will have more than one Category 1 hazard.
2. The total sum required to remedy all Category 1 hazards is less than the total number of Category 1 hazards multiplied by the average costs; this is because the modelling avoids the double counting of costs where repair work/energy improvements mitigate more than one hazard.

3. Sample sizes for some Category 1 hazards are very small (in italics) and are included for quantification purposes only. For some hazards, like explosions, no cases were identified in the survey (but this does not mean there are no dwellings with any of these hazards). There will, therefore, be a degree of uncertainty around these estimates because any calculations relating to cost benefits and payback periods are very sensitive to the mix of hazards present in England.

4. Three of the 29 Housing Health and Safety Rating System (HHSRS) hazards are not measured in the EHS (asbestos, biocides, volatile organic compounds) because they require an intrusive inspection, which is not practicable in a sample survey.

Source: Modelled using English Housing Survey 2018/2019

Table 2: HHSRS Category 1 hazards by age of HRP, 2018/19

		HRP aged under 55	HRP aged 55 or over	Total
No Category 1 hazard	Count	11,061,493	9,935,975	20,997,468
	%	90.6%	89.5%	90.1%
Category 1 hazard	Count	1,141,397	1,166,679	2,308,076
	%	9.4%	10.5%	9.9%
Total	**Count**	**12,202,890**	**11,102,654**	**23,305,544**
	%	**100.0%**	**100.0%**	**100.0%**

Base: all homes
Source: English Housing Survey 2018/2019

Figure 1: HHSRS Category 1 hazards homes by age of HRP, 2018/19
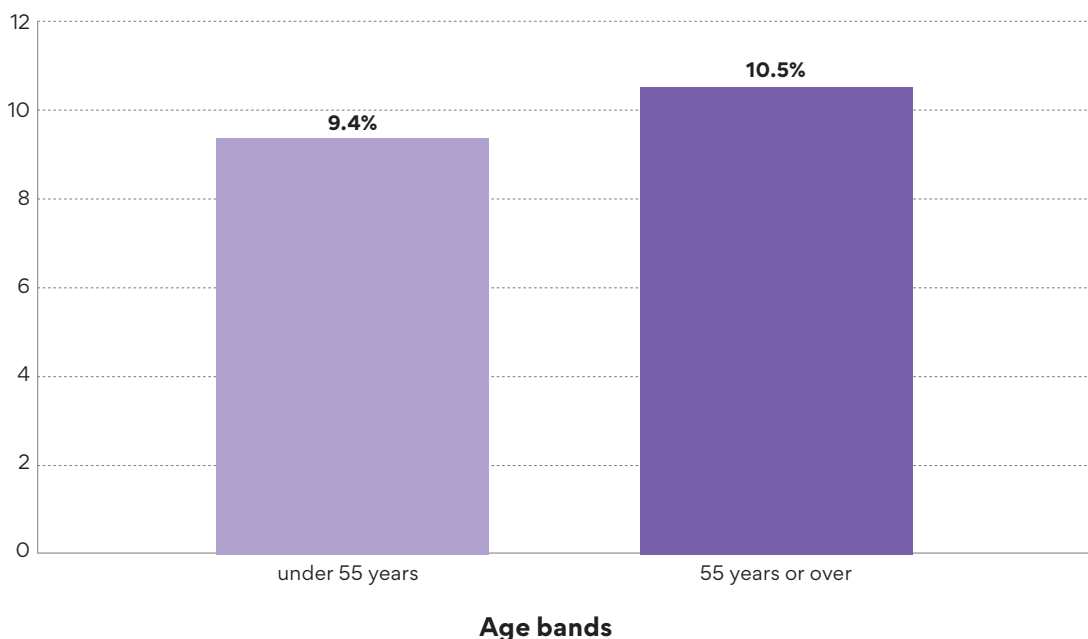
Percentage

Base: all homes
Source: English Housing Survey 2018/2019

Table 3: Excess cold homes by age of HRP, 2018/19

		HRP aged under 55	HRP aged 55 or over	Totals
No Category 1 hazard	Count	12,001,846	10,662,042	22,663,888
	%	98.4%	96.0%	97.2%
One Category 1 hazard	Count	201,044	440,612	641,656
	%	1.6%	4.0%	2.8%
Total	**Count**	**12,202,890**	**11,102,654**	**23,305,544**
	%	**100.0%**	**100.0%**	**100.0%**

Base: all homes
Source: English Housing Survey 2018/2019

Figure 2: Excess cold homes by age of HRP, 2018/19

Percentage

Age bands
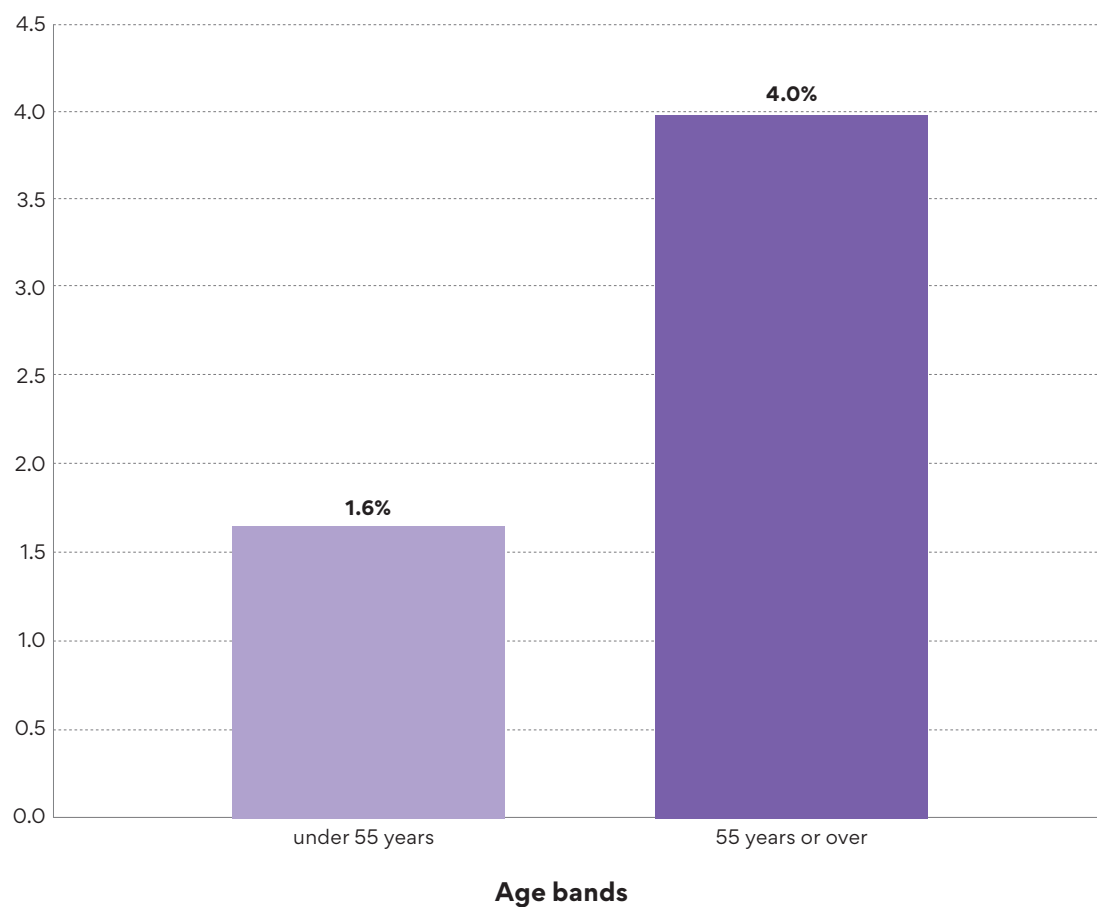
Base: all homes
Source: English Housing Survey 2018/2019

3. Work Package 3 – Cost of Poor Housing to the NHS Among Older Households (Including Illness and Disability)

Cost of poor housing for homes with at least one person with a long-term sickness or disability. Work Package 3 is a continuation of Work Package 2, where the data also encompasses households occupied by at least one person with long-term illness or disability.

Table 5 shows the number of homes for those with a HRP aged 55 or older that are defined as 'poor housing', having one or more Housing Health and Safety Rating System (HHSRS) Category 1 hazards.

It gives the approximate total costs to repair each of these hazards as well as the total repair cost to mitigate all poor housing so that the risk of harm in these homes is no worse than the national average for the age and type of home. Table 5 also provides the savings to the NHS if these hazards were mitigated; as well as the estimated payback in years of fixing the hazard.

The key findings are:

– Around 821 thousand homes with one or more HHSRS Category 1 hazards, defined as a 'poor home' were occupied by least one person with a long-term illness or disability, Table 4. (EHS 2018/19)

– Around two-thirds (65%, 533 thousand) of these poor homes with at least one person with a long-term illness or disability were occupied by a household with a HRP aged 55 or older, Figure 3. (EHS 2018/19)

– Within all homes with at least one person with a long-term illness or disability, poor homes were equally likely to be occupied by a household with a HRP aged 55 or older (10%) compared with a HRP aged under 55 (9%), Figure 4. (EHS 2018/19)

– The average cost of repair to these homes was £3,741, the full cost of repairing all these homes was around £3.2 billion and the potential average annual cost saving to the NHS was £370 million.

3. Work Package 3 - Cost of Poor Housing to the NHS Among Older Households (Including Illness and Disability)

– The most prevalent HHSRS Category 1 hazards in these homes were falls on stairs, excess cold, and falls on the level, Table 5. (EHS 2018/19)

Table 4: Category 1 hazards for homes with at least one person with a long-term illness or disability split by the age of HRP, 2018/19

		No Category 1 hazard	One Category 1 hazard	Total
HRP aged under 55 years	Count	2,935,668	288,619	3,224,287
	% within age band	91.0%	9.0%	100.0%
	% of total households	39.0%	35.1%	38.6%
HRP aged 55 years or over	Count	4,593,280	532,848	5,126,128
	% within age band	89.6%	10.4%	100.0%
	% of total households	61.0%	64.9%	61.4%
Total	**Count**	**7,528,948**	**821,467**	**8,350,415**
	% within age band	**90.2%**	**9.8%**	**100.0%**
	% of total households	**100.0%**	**100.0%**	**100.0%**

Figure 3: HHSRS Category 1 hazards for homes with at least one person with a long-term illness or disability by age of HRP, 2018/19 ('000 homes)

533
64.9%

289
35.1%

● age of HRP under 55 years old   ● age of HRP 55 and over
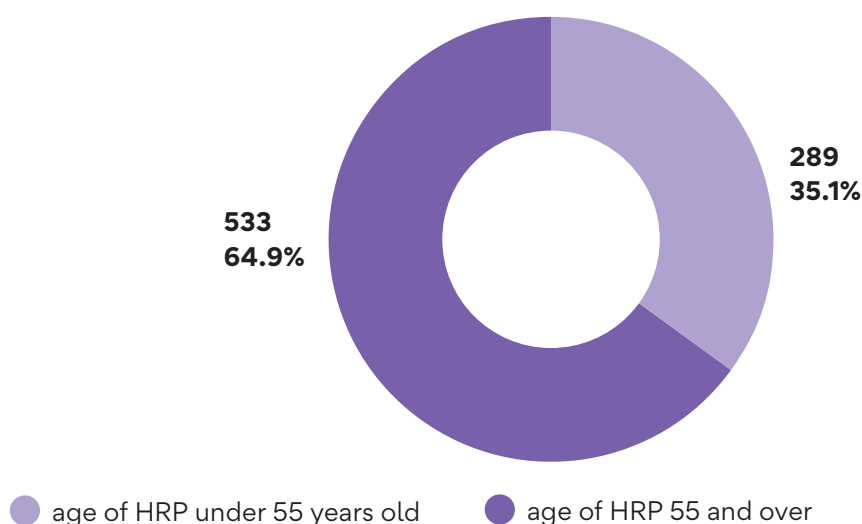
Base: All homes with a HHSRS category 1 hazard/s and with at least one person with a long-term illness or disability
Source: English Housing Survey 2018/19

Figure 4: Age of HRP with at least one person with a long-term illness or disability with a HHSRS category 1 hazard, 2018/19

Percentage
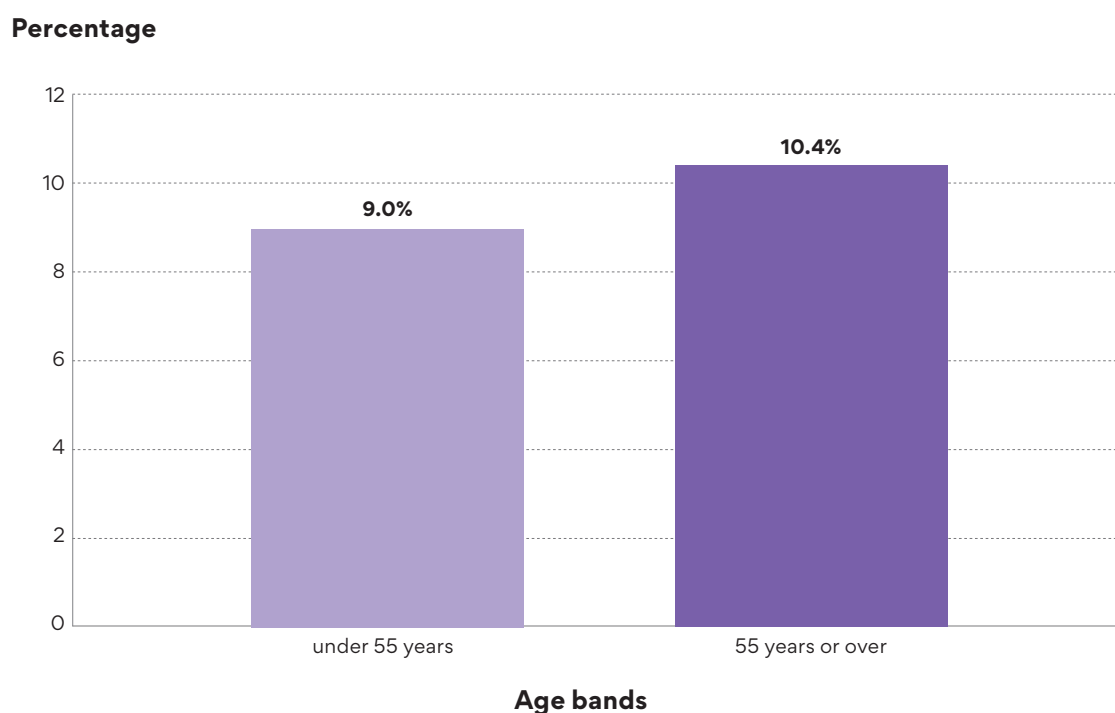
Base: all homes with at least one person with a long-term illness or disability
Source: English Housing Survey 2018/19

Table 5: Category 1 hazards for homes with a person with a long-term illness or disability, with estimated repair costs and NHS health costs savings, 2018/19

Hazard	Number of Category 1 Hazards	Average cost per dwelling (£)	Total cost to mitigate hazard (£)	Savings to the NHS per annum if hazard mitigated (£)	Payback (years)
Falls on stairs	332,681	1,093	363,628,630	70,709,787	5.14
Excess cold	253,991	6,106	1,550,957,528	186,631,705	8.31
Falls on the level	130,841	1,243	162,692,122	33,827,478	4.81
Total with Category 1 hazard	**821,467**	**3,741**	**3,151,793,171**	**370,111,474**	**8.52**

Table Notes:

1. The total sum of all dwellings with Category 1 hazards will be less than the sum of the individual hazards as some dwellings will have more than one Category 1 hazard.

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2. The total sum required to remedy all Category 1 hazards is less than the total number of Category 1 hazards multiplied by the average costs; this is because the modelling avoids the double counting of costs where repair work/energy improvements mitigate more than one hazard.

3. Sample sizes for some Category 1 hazards (not included in this table but included in the total) are very small and are included for quantification purposes only. For some hazards, like explosions, no cases were identified in the survey (but this does not mean there are no dwellings with any of these hazards). There will, therefore, be a degree of uncertainty around these estimates because any calculations relating to cost benefits and payback periods are very sensitive to the mix of hazards present in England.

4. Three of the 29 Housing Health and Safety Rating System (HHSRS) hazards are not measured in the EHS (asbestos, biocides, volatile organic compounds) because they require an intrusive inspection, which is not practicable in a sample survey.

4. Work Package 4 – Centre for Ageing Better Adaptations Model Update

4.1 Introduction

This report and the modelling work underpinning it is an update of the figures and assumptions generated during the 2017 BRE Client Report – Cost Benefit Analysis of Home Adaptations (Garrett and Roys, 2017; pg. 83). That report was used to inform The Role of Home Adaptations in Improving Later Life Report (Powell et al, 2017) published in November 2017 using Centre for Ageing Better funding.

One of the objectives of the review is to model the population health impact and value of the home adaptations in terms of costs. To achieve this, BRE has modelled data from the English Housing Survey (EHS), which provided estimates of population for key housing and household characteristics. This is combined with estimates of cost-savings for types of adaptations found from the literature review undertaken by University of the West of England.

The methodology used for this work package is taken from the 2017 BRE Client Report. The methodology for the 2017 report was adapted from the methodology used in the BRE reports 'The Cost Benefit to the NHS arising from Preventative Housing Interventions' (Garrett et al, 2016) and 'The full cost of poor housing' (Roys et al, 2016). This was used to provide a cost-benefit analysis of home adaptations that can mitigate the risk of a harmful event occurring in the home where the risk is assessed as significantly worse than average under the Housing Health and Safety Rating System (HHSRS). Where a risk of harm is significantly worse than average, that home is considered to be 'poor housing'.

The analysis of the 2018/19 EHS classifies an 'older person' as anyone aged 55 years or over, whereas the analysis of the 2013/14 EHS classified an older person as one aged 65 years or over. The inclusion of the 55-64 year age bracket reflects the changing discourse of ageing research, which aims to improve inclusivity. Reflecting that those younger than 65 may need home adaptations can help to overcome the negative stigma associated with home adaptations (Bailey et al, 2019), and allow people to live longer and

healthier at home before requiring care. The extension of the definition of an older person to include the 55-64 year age bracket also ensures consistency with analysis in Work Packages 2 and 3.

The literature review demonstrates that home adaptations can deliver direct personal benefits such as reducing risk from falls and improving personal hygiene, as well as direct economic benefits such as by delaying long term care requirements. Home adaptations may also provide indirect benefits including an improvement of quality of life, improved wellbeing/mental health, increased dignity, and increased social interaction and integration. Another potential indirect benefit is a reduction on the burden placed on carers and relatives.

After presenting the headline figures, this section provides an overview of the need for home adaptations among older households. This section then looks at the costs and benefits of mitigating hazards through home adaptations, highlighting return on investment (ROI) and payback periods, and the range of benefits individual adaptations can provide. The cost and benefit of repair is shown for some common hazards. For the hazard of falls on the stairs, where remedial action delivers the best ROI, the cost benefit analysis is adapted to include the cost of a risk assessment.

4.2 Key Figures from the Most Recent EHS

A rapidly ageing population with rising levels of disability and physical impairment increases the need for adaptations. Other contributing factors include the age, condition, and accessibility of the existing housing stock. *Text in italics shows the key figures from the previous report in 2017 using 2014 EHS figures.*

The English Housing Survey 2019 reveals that:

1) About half of all households (11.7 million) contain an adult aged 55 or over. *In 2014, three in ten households (6.9 million) contain an adult aged 65 years or over.*

2) Three quarters (77%) of households where the oldest person was aged 55 or over were owner occupied. *In 2014, three quarters (76%) of households where the oldest person was aged 65 and over were owner occupied.*

3) Over a third (37%) of those aged 55 or over live alone. *The 2014 survey revealed that almost half (47%) of those aged 75-84, and 61% of those 85 and over, lived alone.*

4) More than five million households containing an adult aged 55 or over report a long-term illness or disability (44%). *In 2014, approximately three million households containing an adult aged 65 or over report a long-term illness or disability (45%).*

5) The majority of older households (77%) live in pre-1980 housing not built to modern accessibility standards. Over a third (35%) live in homes built before 1945. *This finding is similar to 2014 statistics.*

6) In 2019 (17%) of homes occupied by an older person failed the Decent Homes Standard (2.1 million). *This is a reduction from the 2014 survey, where one in five homes (20%) occupied by an older person failed the Decent Homes Standard.*

7) About three quarters of a million households (770,000; 52%) containing at least one adult aged 55 years or over, with a long-term illness or disability, self-reported the need for installation of at least one adaptation. *In 2014, close to half a million households (475,000; 40%) containing at least one adult aged 65 years or over, with a long-term illness or disability, self-reported the need for installation of at least one adaptation.*

8) Very few people needing adaptations are aiming to move and desire to move declines with increasing age. *This is consistent with 2014 findings.*

9) In addition, 4% of households that included an adult aged 55 years or over are living in homes with the most serious risk of falls on stairs and a further 5% live in homes where such risks are less serious but still higher than average. *In 2014, 4% of households that included an adult aged 65 years or over are living in homes with the most serious risk of falls and a further 7% live in homes where such risks are less serious but still higher than average.*

4.3 Analysis of the 2018/19 EHS

4.3.1. Households Needing Home Adaptations

Through two components, a household interview and a physical inspection of a subsample of properties, the EHS collects information about people, their housing circumstances and the condition of their home. During the interview survey, respondents are asked whether any member of their household has a long-term illness of disability which limits their daily activities. Those who answer yes are then asked whether there is a need for any home adaptation(s), and whether these have been installed. Any need for a home adaptation is therefore subjective; it is based on the respondent's own assessment of need and may differ from any need identified through a formal assessment of a trained occupation therapist.

From the 2018/19 EHS data, we can estimate that roughly half of all households (11.7 million) contain an adult aged 55 or over. In about 41% of these households, it was reported that a person aged 55 years or over had a long-term disability or limiting illness. 31% of households reporting a long-term illness stated a need for an adaptation. Just under 13% of all households with an adult aged 55 or over reported a need for an adaptation

in 2018/19. In 49% of households requiring an adaptation, the adaptation was already present. This leaves just over half of households (51%) who need an adaptation still requiring an adaptation, equating to a total of 759,000 households, or 7% of all households with a person aged 55 years or over across England.

The above information is visualised in Figure 5, where data taken from the 2018/19 EHS is compared with that of the 2013/14 EHS. The proportion of households in 2018/19 with a person aged 55 or over who needs a home adaptation and does not have an adaptation is notably higher at 51%, than the proportion of households in 2013/14 with a person aged 65 years or over who needed and did not have a home adaptation, which was 40%.

Figure 5: Graph showing all households broken down by age oldest person, presence of a long-term limiting illness, households who need an adaptation, and households who need an adaptation but do not have an adaptation, 2013/14 and 2018/19.

Percentage
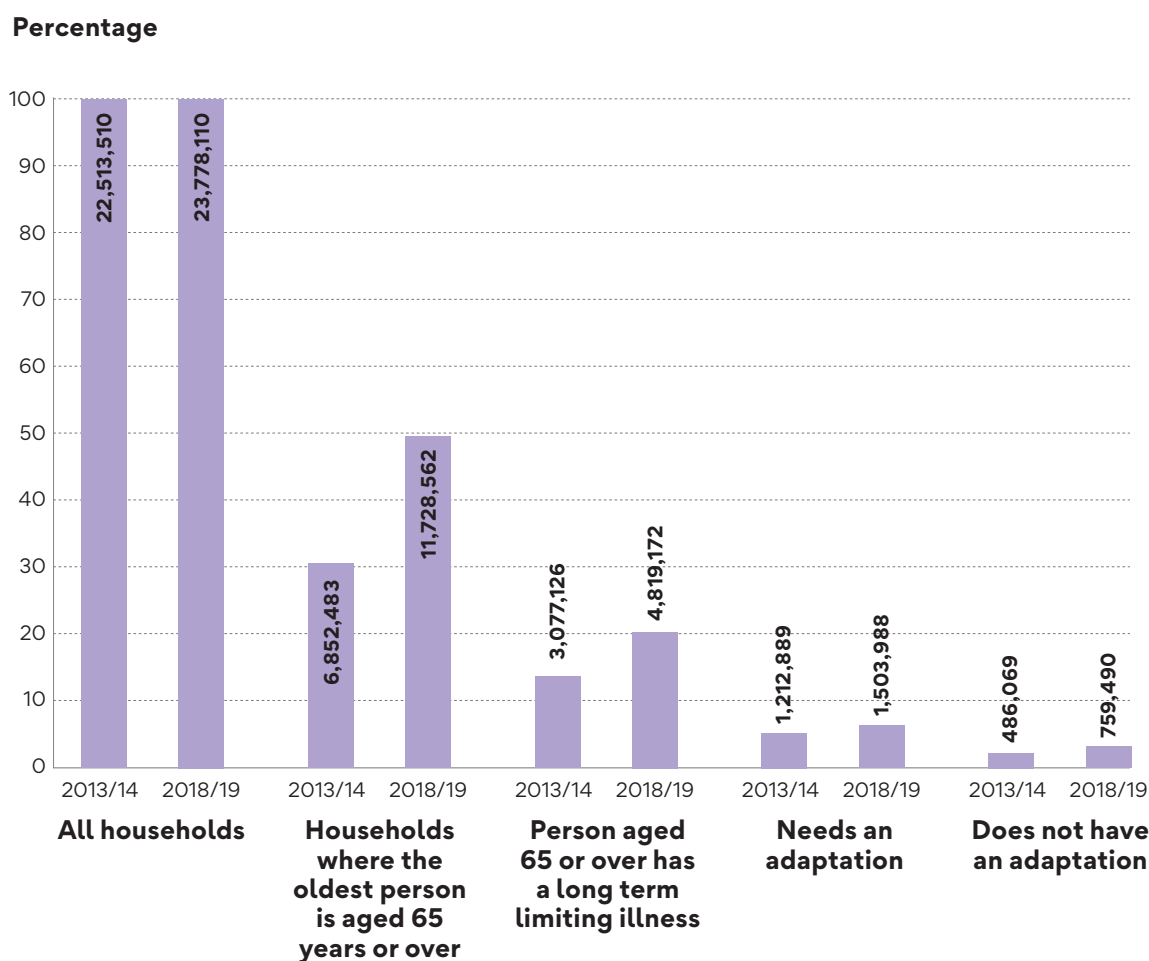
Base: All households
Source: English Housing Survey's 2013/14 and 2018/19
Note: The grey bar represents the previous red bar for that EHS year to show that each consecutive bar is a proportion of the previous bar.

4.3.2. Cost

Foundations[4] provided data on the types of adaptations and the average costs associated with these adaptations in the original model (Garrett and Roys, 2017). Estimations were made regarding the distribution and typical cost of 30 common home adaptations ranging from a home extension to the addition of a handrail or new toilet seat. The distribution of home adaptations across the total is assumed to have remained the same, whilst the typical cost of each adaptation has been adjusted for inflation. The full table is shown in the appendices in Table 16. By considering the frequency of adaptations, and the typical cost, it is possible to estimate the average cost of an adaptation. The average cost in 2020 was £3,073, which is an increase of 14% from 2014 when the typical cost was £2,694, reflecting inflation.

4.3.3. Benefits

Announced in 2013, the £3.8 billion Better Care Fund (BCF) included central funding of £220 million for Disabled Facilities Grants (DFGs) in the financial year 2015/16. Considering a budget of £220 million and the 40,000 who were expected to benefit from the grant, the average available funds for the financial year of 2015/16 were £5,500 per household (Garrett and Roys, 2017).

The 2015 Comprehensive Spending Review significantly increased the allocation of DFG funding to local authorities. In the financial year 2019/20, DFG funded 58,181 adaptations from a budget of £550 million (Foundations, 2021). Therefore, the average available fund for the 2019/20 financial year was £9,500 per household. Table 6 highlights key information regarding DFGs for 2015/16 and 2019/20.

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4 [Foundations](#)

Table 6: DFG statistics, 2015/16 and 2019/20

	2015/16	2019/20
Annual DFG Budget *(thousand)*	£220,000	£550,000
Number of households benefiting from a DFG funded adaptation	40,000	58,181
Proportion of households with an older person expected to benefit from a DFG funded adaptation	0.6%	0.5%
Proportion of households with an older person, who needs an adaptation, expected to benefit from a DFG funded adaptation	8.2%	7.7%
Average available funds per household	£5,500	£9,453
Average cost of a home adaptation	£2,694	£3,073
Average number of adaptations that can be afforded through a DFG, per household	2.0	3.1

Table Notes:

1. Definition of an "older person" varies between the analysed years. "Older person" in 2015/16 refers those aged 65+, and in 2019/20 to those aged 55+.

2. Statistics for the 'Proportion of households with an older person expected to benefit from a DFG funded adaptation' and 'Proportion of households with an older person, who needs an adaptation, expected to benefit from a DFG funded adaptation' is taken from Figure 5.

3. The average available funds per household is calculated by dividing the annual DFG budget by the number of households benefiting (or expected to benefit) from a DFG funded adaptation.

4. The average number of adaptations that can be afforded through a DFG per household is calculated by dividing the average cost of a home adaptation by the average available funds per household.

Sources:

1. Cost benefit analysis of home adaptations (Garrett and Roys, 2017).

2. Disability Facilities Grants: Activity Report for 2019/20 (Foundations, 2021).

3. Average cost of a home adaptation is taken from Table 16 in the Appendices.

Figure 6: Return on Investment (ROI) for home adaptations, 2013/14 and 2018/19

Return on Investment

Benefit to society per adaptation
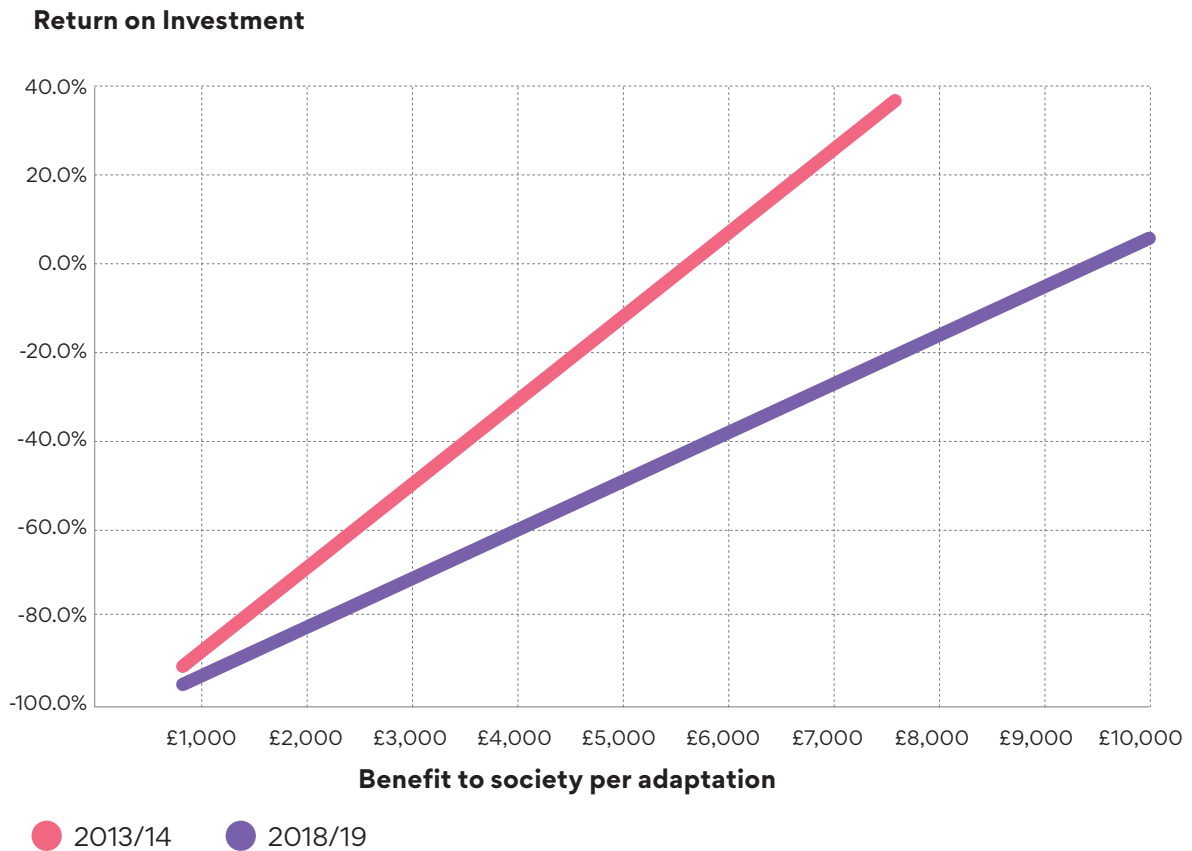
● 2013/14   ● 2018/19

Base: All households
Note: ROI is derived from the average available funds per household from the DFG (Table 6)
Source: English Housing Survey's 2013/14 and 2018/19

Comparing the available funds per household to the average cost of an adaptation, we can see that in 2015/16 a household could afford on average two adaptations from their DFG grant. This has increased to just over three adaptations per household using a DFG grant, in 2019/20. However, a slight reduction in those who need an adaptation and will receive once funded through a DFG is observed in 2019/20. Figure 6 illustrates the ROI profile and Figure 7 shows the basic payback period for the average fund of a household adaptation for the financial years 2015/16 and 2019/20. Where the ROI is 0%, or where the payback period is one year, the investment cost is equal to the benefit. Positive ROI is where the benefit exceeds the cost and relates to the cost being paid back within a year. Negative ROI results in a longer payback period.

Figure 7: Basic payback for home adaptations, 2013/14 and 2018/19

Return on Investment

Benefit to society per adaptation
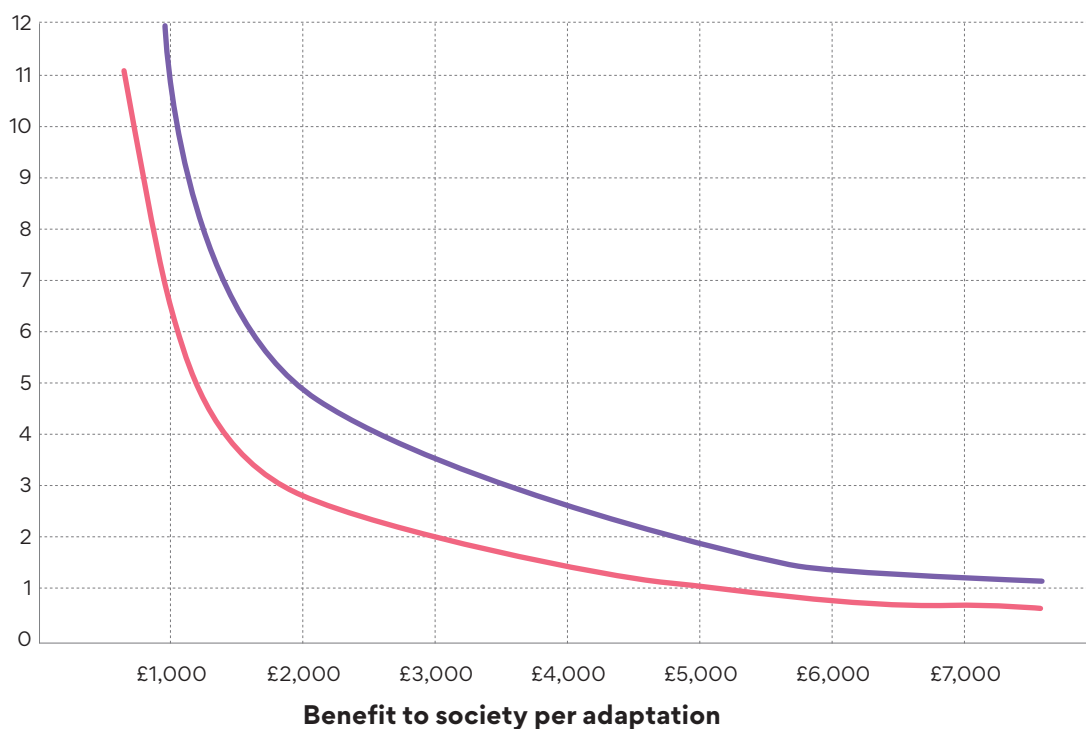
● 2013/14   ● 2018/19

Base: Households that need an adaptation
Source: English Housing Survey's 2013/14 and 2018/19

The ROI increased by 73% from £5,500 in 2015/16 to £9,500 in 2019/20. This is a product of the funds available for home adaptations rising at a disproportionate rate to household demand, as seen in Table 6.

It is difficult to quantify the annual benefits from an adaptation and how these benefits are likely to vary between adaptations. Table 7 displays some possible direct benefits to the NHS and adult social care budgets from adaptations. In addition to these direct benefits, indirect benefits to society that are likely to occur from home adaptations are also illustrated. In recent years, there has been an increase in information and research surrounding these benefits, as explored in the literature review of this report. However, a lack of information regarding the quantification of these benefits remains. A better understanding of these benefits would enable both better adaptation decision making and provide a justification for greater investment in future adaptations.

Table 7: Direct and indirect benefits of adaptations

Key: ✱ Highly likely ✦ Likely

| Type of Adaptation	Access and usability	Personal security	Other reason	Reduced care in the community	Reduced risk from falls	Better personal hygiene	Delayed long term health requirements	Increased dignity	Social interaction	Social integration	Improved quality of life	Less burden on carers / relatives	Improved mental health / wellbeing
	Reason			Direct benefit				Indirect Benefit					
Extension of home	✱			✦		✱	✦	✦			✦		✦
Redesign kitchen	✱			✱			✦		✦		✦	✦	✦
Redesign bathroom	✱			✱			✦	✦			✦	✦	✦
Graduated floor shower	✱				✦	✱	✦				✦		✦
Stair lift	✱			✦	✱				✦		✦	✦	✦
External ramp	✱				✱		✦			✦			✦
New bath / shower room	✱			✦		✱	✦	✦			✦	✦	✦
Shower replacing bath					✱	✱	✦	✦			✦	✦	✦
Wheelchair accessible parking	✱						✦			✦	✦		✦
Adjustable bed or related aid	✱			✦	✱						✦	✦	✦
Hoist	✦		✱			✱	✦				✦		
Wide doorways	✱								✦	✦	✦	✦	
Additional / relocate toilet	✱					✱	✦	✦			✦	✦	✦
Low level bath	✱			✦	✱	✱	✦	✦			✦		✦
Relocate bath / shower	✱			✦		✱	✦	✦			✦		✦
Additional heating			✱				✦		✦		✦		✦
Shower over bath			✱	✦		✱		✦			✦	✦	✦
Wide paths	✱									✦	✦		✦
Entry phone		✱							✦		✦		✦
Other external adaptation	✱												✦
Other modification of kitchen	✱			✦					✦		✦		✦
Individual alarm system		✱			✦			✦			✦	✦	✦
External rail to steps	✱				✱					✦	✦		✦
Internal ramp	✱				✱				✦		✦		
Bath / shower seat	✱			✦	✱	✱	✦	✦			✦	✦	✦
Visual / hearing impairment related			✱					✦	✦	✦			✦
Wide gateway	✱										✦	✦	✦
Electrical modifications			✱										✦
Grab rail or other rail	✱				✱				✦		✦		✦
Toilet seat	✱			✦		✱		✦			✦		✦

Source: The likely direct and indirect benefits for home adaptations illustrated in Table 7 were determined by consensus by the researchers who created the report "Cost benefit analysis of home adaptations" (Garrett and Roys, 2017).

Key: ✱ Highly likely ✦ Likely

4.3.4. Cost of Repairs

For five of the hazards, falls on/from stairs, falls on the level, falls between the levels, fires and hot surfaces, the cost to repair or mitigate hazards can be determined using data collected by the EHS5[5]. The range of cost to repair a hazard has significant variation, as does the cost to repair for different hazards, as shown in Figure 8

Figure 8: Range of cost of repair for five Category 1 hazards, 2018/19
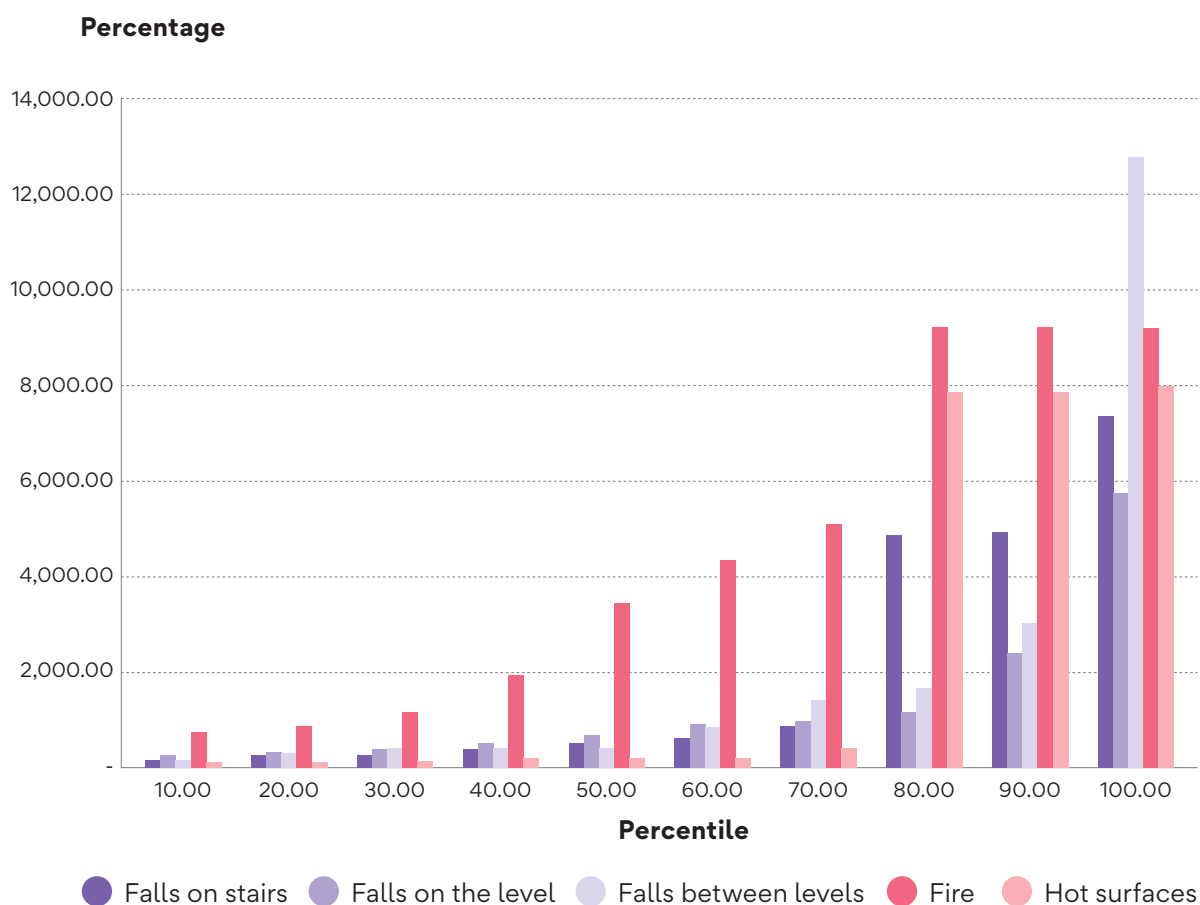
Base: All households with a Category 1 hazard
Source: English Housing Survey 2018/19

The median and mean average cost of repair for the 2018/19 EHS are compared with those of the 2013/14 EHS in Table 8.

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5 The data for some hazards is considered less reliable due to a small sample size; the risks of food safety, sanitation, ergonomics, domestic hygiene and falls associated with baths. Even though the data for 10 hazards is included in the model, caution should be applied to interpretating the results for these five hazards. Therefore, they have been excluded from analysis.

Table 8: Median and average cost to repair/mitigate five hazards, 2013/14 and 2018/19

Hazard	Median (2013/14)	Median (2018/19)	Mean (2013/14)	Mean (2018/19)
Falls on stairs	£386.64	£485.15	£1,009.27	£1,443.79
Falls on the level	£389.88	£670.89	£733.78	£1,012.16
Falls between levels	£891.38	£403.50	£1,070.10	£1,299.02
Fire	£1,085.51	£3,425.01	£4,456.24	£4,142.63
Hot surfaces	£85.54	£176.02	£1,037.50	£1,940.02

Base: All households with a Category 1 hazard
Source: English Housing Survey 2018/19

The difference in median value from cost of repair varies significantly for most repairs when comparing the figures of the two surveys. The median value has risen significantly for most hazards since 2013/14. The cost to repair for falls between levels is an exception, where the median value has fallen by more than half. The difference in the mean cost of repair is more similar for most hazards, reflecting a smaller increase.

4.3.5. Benefits of Repairs

Using the methodology outlined in the 'Full cost of poor housing' report (Roys et al, 2016), it is possible to determine the benefit associated with improving the poorest housing lived in by adults aged 55 years or over so that the risk of injury in their home is no worse than the national average.

Table 9 shows the median estimates of the likelihood of different harm outcomes and the probability of having an incident for average housing and worse than average housing for the five hazards discussed in 4.3.4. The number of households with a Category 1 hazard (the most serious type of hazard) or with a worse than average hazard is also shown.

Table 9: Probability and likelihood of hazardous outcomes for households with an adult aged 55 or over.

Hazard	Number of households (n)	Probability of having an incident (1/x)	Likelihood of extreme outcome (%)	Likelihood of severe outcome (%)	Likelihood of serious outcome (%)	Likelihood of other outcome (%)
Category 1						
Falls on stairs	439,706	32.0	2.2	15.8	31.6	50.5
Falls on the level	190,335	18.0	0.2	21.5	46.4	31.9
Falls between levels	92,223	6.0	0.5	4.6	21.5	73.4
Fire	81,969	56.0	10.0	7.3	46.4	36.3
Hot surfaces	33,243	18.0	0.1	15.8	39.0	45.2
Not Category 1, but higher than average						
Falls on stairs	630,664	100.0	2.2	10.0	21.5	66.3
Falls on the level	314,474	56.0	0.2	10.0	31.6	58.2
Falls between levels	679,458	180.0	0.2	2.2	10.0	87.6
Fire	358,892	1000.0	10.0	4.6	31.6	53.8
Hot surfaces	131,594	32.0	0.1	1.0	21.5	77.4
Average						
Falls on stairs	-	245.0	1.9	6.7	21.7	69.7
Falls on the level	-	135.0	0.2	13.8	27.3	58.7
Falls between levels	-	1693.0	0.2	1.8	9.9	88.1
Fire	-	4760.0	7.0	2.6	29.1	61.3
Hot surfaces	-	39.0	0.1	1.4	21.9	76.5

Base: Households with a person aged 55 years or older
Source: English Housing Survey 2018/19

Two different cost and benefit weightings can be applied to the data. Table 10 shows these two different methods of displaying the cost for hazard mitigation: the cost to the NHS and the cost to society. The cost-benefit to the NHS and society for repairing/mitigating the five hazards, where the hazard exists for someone aged over 55, is shown in Table 11.

Table 10: Benefit weighting (2018/19).

Class of Harm	Cost to the NHS	Cost to Society
Extreme Outcome	£127,250	£1,966,542
Severe Outcome	£35,630	£52,631
Serious Outcome	£5,090	£9,580
Other Outcome	£204	£231

Source: 'The full cost of poor housing' (Roys et al, 2016). Original figures adjusted for inflation.

Table 11: Potential benefit if all houses containing a Category 1 hazard, and all worse than average housing, containing an adult aged 55 years and over, were repaired.

Hazard	Benefit to the NHS	Benefit to Society
Falls on stairs	£157,693,000	£883,150,000
Falls on the level	£113,467,000	£226,270,000
Falls between levels	£58,825,000	£243,458,000
Fire	£30,083,000	£358,541,000
Hot surfaces	£13,045,000	£20,794,000

Base: Worse than average housing with a person aged 55 years or older, containing a Category 1 hazard,
Source: English Housing Survey 2018/19

By comparing the cost-benefits of repair work to the costs of repair, the ROI for mitigating these hazards can be determined. Table 12 shows the cost benefit calculation, using benefit to society, values from Table 11.

Table 12: Cost benefit to society of five hazards (2019/20)

Hazard	Cost	Benefit	ROI	Payback (years)	NPV (3% discount)
Falls on stairs	£519,294,000	£883,150,000	70.1%	0.59	0.59
Falls on the level	£338,673,000	£226,270,000	-33.2%	1.50	1.51
Falls between levels	£311,377,000	£243,458,000	-21.8%	1.28	1.28
Fire	£1,509,018,000	£358,541,000	-76.2%	4.21	4.44
Hot surfaces	£29,015,000	£20,794,000	-28.3%	1.40	1.40

Base: All households with a person aged 55 years or over
Source: English Housing Survey 2018/19

Net Present Value (NPV) uses a 3% discount rate year on year. As payback periods are short for most hazards, the NPV has a minimal impact on the payback period. The payback period is shortest for mitigating falls on stairs, achieving a return on investment in just over half a year. The payback periods for all remaining hazards, except for fire hazards, is 18 months or under. A similar table could be generated for cost-benefits to the NHS, using the benefit figures in Table 11. As the benefit to the NHS is much lower than the benefit to society, and because the cost to mitigate would remain the same, much longer payback periods for benefit to the NHS would be incurred. Table 13 displays the cost benefit calculation for the five Category 1 hazards from the 2013/14 EHS.

Table 13: Cost benefit to society of five hazards (2013/14)

Hazard	Cost	Benefit	ROI	Payback (years)	NPV (3% discount)
Falls on stairs	£290,653,000	£469,914,000	61.7%	0.62	0.62
Falls on the level	£174,907,000	£109,946,000	-37.1%	1.59	1.61
Falls between levels	£528,590,000	£41,842,000	-92.1%	12.63	15.64
Fire	£322,905,000	£149,642,000	-53.7%	2.16	2.20
Hot surfaces	£9,655,000	£9,889,000	2.4%	0.98	0.98

Base: All households with a person aged 65 years or over
Source: English Housing Survey 2013/14

Consistent between the 2013/14 and 2018/19 surveys, the cost-benefit of falls on stairs has the greatest ROI and shortest payback period. The biggest change between the two surveys concerns falls between levels. A decrease in the cost of repair and an increase in cost benefit has led to significant improvements to ROI and payback, bringing it further in-line with the other hazards. The other major difference is the cost of repair for fire hazards, which has increased at a much higher rate than the benefits of repair, resulting in a decrease in ROI and increase in payback time. The lower percentiles for cost of fire hazards have increased sharply, resulting in a high increase in the median cost, which is the preferred cost value used in the analysis[6]. The inclusion of the 55-64 year age bracket within the 2018/19 EHS analysis means that this sample size is larger than the 2013/2014 sample size, which could account for some of the changes in the cost benefit analysis.

The difficulty with looking at the straight cost benefit for households is that it assumes that the hazard is already known. Therefore, it is sensible to provide an estimate of the cost including the cost of an HHSRS assessment within the analysis. Table 14 considers what the effect of increasing the cost of an assessment would have on the cost benefit calculation for falls on stairs[7]. The table assumes that an HHSRS assessment would have to be performed on all households with a person aged 55 years or older.

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6 Cost values are skewed to the higher values, so the best measure of central tendency for the data is considered to be the median (50th percentile).

7 This hazard has been selected because it is the most common hazard among households with a person aged 55 years or older and because it delivers the best ROI for hazard mitigation.

Assuming the proportion of households with the hazard remains consistent, it may be possible to scale down the calculation to the smaller sub-groups who are most likely need an adaptation. For example, households who need an adaptation but do not have an adaptation.

Table 14: Cost benefit of falls on stairs, including an HHSRS assessment for all homes with an adult aged 55 years or older.

Cost of HHSRS assessment	Total HHSRS assessment cost	Cost of mitigating hazard	Benefit to society	ROI	Payback (years)
-	-			70.1%	0.59
£50	£0.586 bn			-20.1%	1.25
£100	£1.173 bn			-47.8%	1.92
£150	£1.759 bn	£519,294,000	£883,150,000	-61.2%	2.58
£200	£2.346 bn			-69.2%	3.24
£250	£2.932 bn			-74.4%	3.91

Base: All households with a person aged 55 years or over
Source: English Housing Survey 2018/19

Even a small cost associated with the HHSRS assessment has a significant impact on the ROI and payback. With an HHSRS assessment assumed to cost £250 per household, an ROI of -74% is estimated with a payback time of just under 4 years. However, it is important to note that an HHSRS assessment is a one off which will assess the property for all potential hazards, and therefore the ROI and payback may benefit from economies of scale – one HHSRS assessment may identify multiple hazards. Additionally, if the assessment can be performed by an individual who is already making an adaptation assessment of the property, such as an Occupational Therapist (OT), then the cost may be kept to a minimum.

4.3.6. Adaptations cost benefit of a hazard mitigation.

Referring to the population breakdown in Figure 5, the costs and benefits associated with both the adaptations and the mitigation for each of the four samples can be compared. These samples are: (1) households where the oldest person is aged 55 or over, (2) households where the older person has a long-term illness or disability, (3) households where the older person needs an adaptation, and (4) households where the older person needs an adaptation but does not have one. In each of the four sample sizes, the total number of adaptations needed remains consistent at 7% of all households

where the oldest person is aged 55 years or over, or 759,000 households[8]. Therefore, the costs and benefits associated with adaptations remains consistent at each level.

However, the cost associated with mitigating the hazard is related to the sample size. All households in the sample need to undergo an HHSRS assessment so that it can be determined which households need a home adaptation. As the sample becomes more focussed on households which are more likely to be at risk from a hazard, the benefit associated becomes more cost effective. This is the trend displayed in Table 15 and Figure 9. Where the benefit to society from mitigating stair hazards exceeds £2,500 in the first year, it becomes more cost effective to focus on the samples where homes are more likely to need the adaptation, specifically households that need an adaptation but do not have an adaptation.
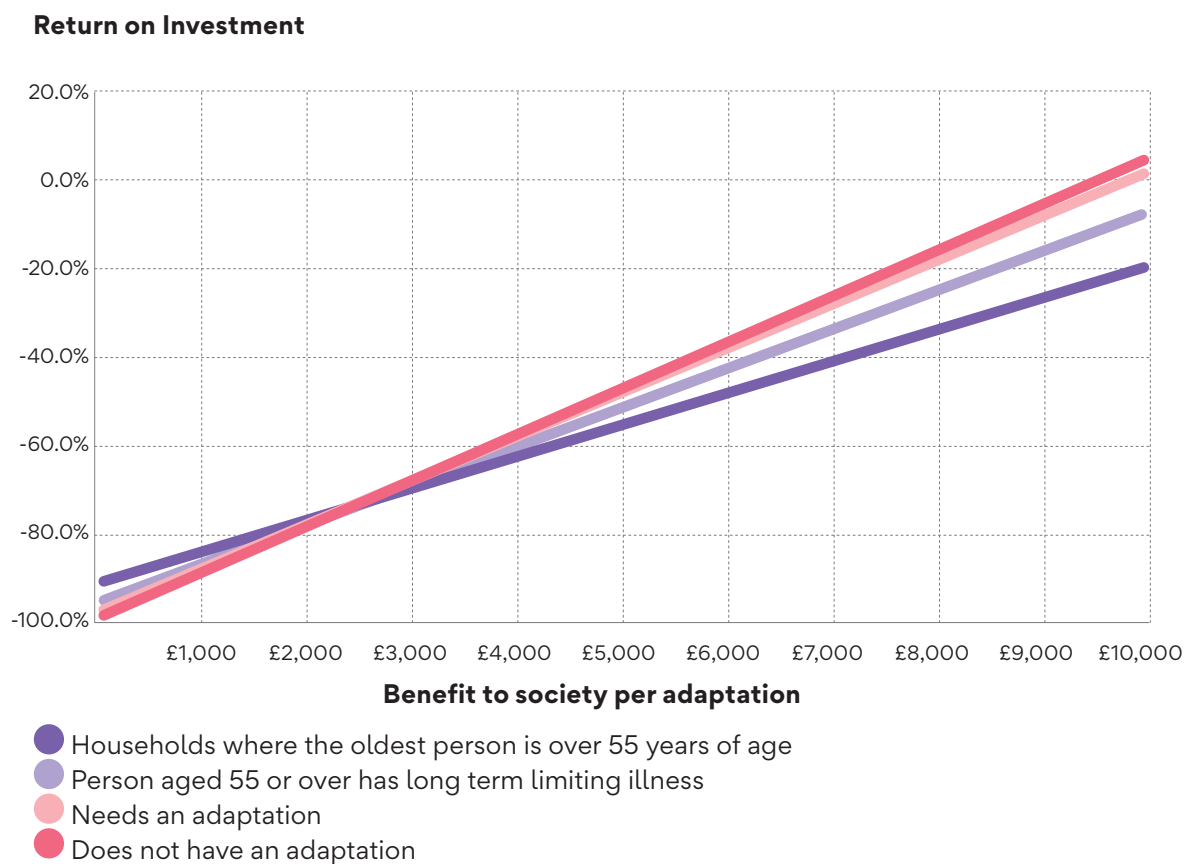
Table 15: Return on Investment for mitigating stair hazards in households with a person aged 55 years or over, with a £250 HHSRS cost, over a range of adaptation benefit values (2018/19)

Benefit value associated with Adaptation in the first year	Households where the oldest person is over 55 years of age	Person aged 55 or over has longterm limiting illness	Needs an adaptation	Does not have an adaptation
£1,000	-84.5%	-86.9%	-88.6%	-89.0%
£2,000	-77.4%	-78.1%	-78.6%	-78.7%
£5,000	-56.0%	-51.6%	-48.7%	-47.9%
£7,500	-38.1%	-29.5%	-23.8%	-22.3%
£10,000	-20.3%	-7.4%	1.1%	3.4%

Base: All households with a person aged 55 years or over
Source: English Housing Survey 2018/19

8 It is noted that we are unlikely to see 759,000 adaptations in one year, but the cost benefit calculation would remain equal with a smaller sample of homes that need adaptations.

Figure 9: Return on Investment for mitigating stair hazards, with a £250 HHSRS assessment cost over a range of adaptation benefit values (2018/19)

Return on Investment

Benefit to society per adaptation

- Households where the oldest person is over 55 years of age
- Person aged 55 or over has long term limiting illness
- Needs an adaptation
- Does not have an adaptation

Base: All household with a person aged 55 years or over
Source: English Housing Survey 2018/19

4.4 Key findings

– We estimate that 759,000 households, or 7% of all households with a person aged 55 years or over across England, need an adaptation and do not have an adaptation. This means that roughly half (49%) of households in England with a person aged 55 who need an adaptation do not have one.

– By accounting for inflation, we estimate that the average cost of a home adaption in 2020 in England was £3,073.

– In 2019, the Disabilities Funding Grant (DFG) funded 58,181 adaptations from a budget of £550 million (Foundations, 2021), resulting in a ROI of £9,500 per household.

– Mitigating worse than average hazards associated with falls on stairs (the most common hazard) records an ROI to society of 70% and a payback period of 7 months. However, incorporating the cost of HHSRS assessments increases the ROI and payback period.

– The model suggests that once the benefit to society from adaptation exceeds £2,500 in the first year, it becomes more cost-effective to concentrate on those homes that are known to need an adaptation.

4.5 Summary and Conclusion

In 2017, BRE produced a cost benefit model for adaptations and hazard mitigation in households where the oldest adult is aged 65 years or over. In this report, BRE have updated the model with figures from the most recent available EHS data and extended the analysis to include adults aged 55 years or over, reflecting changing trends in ageing research. Due to a lack of robust evidence regarding the economic benefits of specific adaptations, the model considers benefits from adaptations over a range of possible values. Consistent with the previous report in 2017, this report calls for a need for a better understanding of the benefits of home adaptations, which would lead to better adaptation decision making and provide a justification for greater investment in home adaptations.

Our analysis finds close to half of households in England to contain an adult aged 55 years of over. Of these households, 41% reported a long-term illness or disability. Further, 31% of those with a longterm illness or disability reported a need for an adaption. Of those reporting a need for an adaptation, 51% of households did not have that adaptation. This equates to approximately 759,000 homes; 7% of all households with a person aged 55 years or over.

Mitigating worse than average hazards associated with falls on stairs records the best ROI, a finding consistent with the 2017 report. The estimated cost to mitigate this hazard in all homes with an adult aged 55 years or over is £519 million but records a benefit to society upwards of £880 million. This equals an ROI of 70% and a payback period of 7 months. The payback period of all hazards analysed except for fire; being falls on stairs, falls between levels, hot surfaces and falls on the level is recorded at 18 months or less.

However, the ROI for mitigating these hazards drops off quickly when the cost of an HHSRS assessment is included. An HHSRS assessment is required to identify those households living with a serious hazard and therefore, require an adaptation. When accounting for an HHSRS assessment, the cost associated with mitigating the hazard is dependent on the sample size, as all homes within the sample would be required to have undergone an HHSRS assessment. Including a £250 HHSRS assessment for all households with a person aged 55 years or older extends the payback period for the repair of falls on stairs to be just under 4 years. However, it is unrealistic to perform an HHSRS assessment on all households in England with a person aged 55 years or over. Therefore, we should explore ways to prioritise which households are most likely to have Category 1 hazard and need a home adaptation. This way we can prioritise which households are most in need of an HHSRS assessment and improve the ROI. The increased sample size and

assumed cost of an HHSRS assessment has reduced the ROI and extended the payback periods in comparison to the previous report.

The model suggests that once the benefit to society from adaptation exceeds £2,500 in the first year, it becomes more cost-effective to concentrate on those homes that are known to need an adaptation (Table 15, Figure 9).

As highlighted in the benefits of adaptations table (Table 7) and in the literature review, there are a huge range of direct and indirect benefits of home adaptations for residents and the communities that they live in. Furthermore, financial benefits to society and the NHS are identified. The 2017 report called for further primary research into the economic and societal benefits of the different types of home adaptations. The literature review provides evidence of high-level research from the last six years. However, a call consistent with conclusions from the previous report, more primary research is needed with the aim of quantifying the benefits and different types of home adaptations so that the cost-benefit model can be developed further.

The available funds provided by the DFG has risen at a disproportionate rate to the number of households who are expected to benefit from an adaptation. The annual DFG budget saw a 150% increase from 2015/16 to 2018/19. However, the number of households benefitting from this fund increased by only 45% (Table 6). The proportion of households needing an adaptation and who are expected to benefit from a DFG funded adaptation fell by half a percent within this timescale (Table 6). This report calls for better ways of identifying those in need of adaptations to make better use of available DFG funding.

4.6 Appendices

Appendices 1: List of assumptions

Adaptations Cost and Benefits: (Sections 4.3.1, 4.3.2 and 4.3.3).

– Data is taken from the EHS 2013 and 2014 combined year sample (reference as 2013/14) and EHS 2018 and 2019 combined year sample (referenced as 2018/19) unless otherwise stated.

– Foundations provided data for the total budget for Disabled Facilities Grants (DFGs) and number of grants conducted within the relevant years.

– Foundations also provided data on the types of adaptations and the average costs associated with these adaptations in the original model (Garrett and Roys, 2017). Updated costs are not available for costs of adaptations, inflated costs using relative inflation from the Consumer Price Index (CPI) were calculated instead (see Table 16 and Table 17).

– The likely direct and indirect benefits for home adaptations illustrated in Table 6 were determined by consensus by the researchers in the original model.

– Average number of adaptations per household is calculated using total DFG budget and number of DFGs per annum.

Cost Benefit to Mitigate Hazards: (Sections 4.3.4, 4.3.5 and 4.3.6).

– Data is taken from the EHS 2013 and 2014 combined year sample (reference as 2013/14) and EHS 2018 and 2019 combined year sample (referenced as 2018/19) unless otherwise stated.

– Cost to NHS and cost to society figures are taken from the Cost of Poor Housing model. 2013/14 model uses values from the 2010/11 Cost of Poor Housing, whilst the 2018/19 model uses values from the 2018/19 Cost of Poor Housing.

– The cost of an HHSRS assessment is assumed to be £250 (EG: Housing Standards Consultants, n.d). In the previous model, an HHSRS assessment was assumed to cost £150.

– Data for Category 1 and Worse than average hazards is assessed within the EHS for the top five hazards (falls on stairs, falls on the level, falls between the level, fire and hot surfaces).

– Data concerning less severe hazards is taken from HHSRS guidance as used in the Cost of Poor Housing Models.

– Risk score for each of the 10 hazards is calculated using formula taken from HHSRS guidance.

– It is assumed that benefits are distributed evenly throughout the population, and therefore selecting a smaller proportion of the population will result in a proportional benefit value.

Appendices 2:

Table 16: Range of home adaptations, and average costs, 2013/14 and 2019/20

Type of Adaptation	% of total	Typical cost (2013/14)	Typical cost (2019/20)
Extension of home	1.47%	£27,500	£31,364
Redesign kitchen	2.01%	£8,500	£9,694
Redesign bathroom	3.27%	£7,550	£8,611
Graduated floor shower	3.78%	£5,750	£6,558
Stair lift	4.87%	£5,400	£6,159
External ramp	4.68%	£4,500	£5,132
New bath / shower room	2.72%	£4,500	£5,132
Shower replacing bath	5.86%	£4,250	£4,847
Wheelchair accessible parking	2.91%	£4,250	£4,847
Adjustable bed or related aid	4.41%	£3,250	£3,707
Hoist	1.15%	£3,150	£3,593
Wide doorways	2.21%	£2,625	£2,994
Additional / relocate toilet	2.75%	£2,500	£2,851
Low level bath	1.96%	£2,000	£2,281
Relocate bath / shower	1.18%	£1,900	£2,167
Additional heating	1.52%	£1,775	£2,024
Shower over bath	3.32%	£1,700	£1,939
Wide paths	2.56%	£1,275	£1,454
Entry phone	2.01%	£1,250	£1,426
Other external adaptation	1.64%	£1,000	£1,141
Other modification of kitchen	1.25%	£1,000	£1,141
Individual alarm system	2.53%	£850	£969
External rail to steps	5.63%	£775	£884
Internal ramp	0.76%	£505	£576
Bath / shower seat	9.64%	£483	£551
Visual / hearing impairment related	1.11%	£475	£542
Wide gateway	1.48%	£275	£314
Electrical modifications	1.02%	£275	£314
Grab rail or other rail	13.03%	£140	£160
Toilet seat	7.24%	£40	£46
Total **Weighted average cost**	**100%**	**£2,694.35**	**£3,072.91**

Note: See Table 17 for the inflation statistics
Source: 'The Cost Benefit to the NHS arising from Preventive Housing Interventions' (Garrett et al, 2016; Table 11).

Table 17 Inflation Statistics (UK)

Year	Inflation (%)
2014	1
2015	1.0099
2016	1.0270
2017	1.0643
2018	1.0930
2019	1.1203
2020	1.1405

Note: Table supporting Table 16
Source: CPI Inflation Calculator (www.officialdata.org).

4.7 References

Bailey, C., Aitken, D., Wilson, G., et al. (2019). "What? That's for Old People, that." Home Adaptations, Ageing and Stigmatisation: A Qualitative Inquiry. *Environmental Research and Public Health, 16*(24).

Foundations. (2021). *Disability Facilities Grants: Activity Report for 2019/20.* Foundations.

Garrett, H., Roys, M., Burris, S., Nicol, S. (2016). *The cost-benefit to the NHS arising from preventative housing interventions.* BRE and IHS.

Garrett, H. and Roys, M. (2017). pp 83-102. *Cost benefit analysis of home adaptations.* BRE Client Report. P106275(4)

Housing Standards Consultant. (n.d). Prices. Available online: Prices - Andy Cope - Housing Standards Consultant Derbyshire and Nottinghamshire

Powell, J., Mackintosh, S., Bird, E., et al. (2017). *The role of home adaptations in improving later life.* Centre for Ageing Better.

Roys, M., Nicol, S., Garrett, H., Margoles, S. (2016). *The full cost of poor housing.* BRE and HIS.

5. Work Package 5 – Decent Homes

Analysis

5.1 Decent Homes Standard

The Decent Homes Standard (DHS) is a technical standard which regulates social housing. The standard was first introduced to the UK in 2000, aiming to provide a minimum standard of housing conditions for all people housed in the public sector. In the social housing white paper from November 2020[9] the government committed to review the DHS. More recently in 2022, the Government consulted on the standard, to gain public opinion on implementing the DHS into the Private Rented Sector (PRS), and in the 2023 Renters Reform bill[10] the government committed to introducing the standard to the PRS. Further information about the Decent Homes Standard can be found through Government guidance on the Decent Homes Standard: review.

5.2 What is a "Decent Home"

For a dwelling to be considered 'decent' under the Decent Homes Standard it must:

– **Be free from any HHSRS Category 1 hazards;**

– **Be in a reasonable state of repair;**

– **Have reasonably modern facilities and services;**

– **Provide a reasonable degree of thermal comfort.**

If a dwelling fails any of these 4 criteria, it is considered 'non-decent', under the Decent Homes Standard.

The decent homes analysis in the tables provided uses the updated 26-hazard HHSRS model for the first criterion listed above. A banded variable of the age of the Household Reference Person (HRP) has been created, in line with the previous Centre for Ageing Better report, to create the groups 'age of HRP under 55 years' and 'age of HRP 55 years or over'. The latter group being the 'older people' group.

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9 The charter for social housing residents: social housing white paper - GOV.UK (www.gov.uk)

10 Renters (Reform) Bill - Parliamentary Bills - UK Parliament

Weighted frequencies and percentages have been provided to give the numbers and proportions of households living in homes that are classed as either decent or non-decent. This was further split by the government office region, and the tenure of the dwelling. The cost to make decent is an estimate of the costs of all work required to make the dwelling decent, centred on the criteria that the dwelling currently fails. The data used in this work package has not been significance tested when compared.

5.3 Decent Homes by Region

Figure 10 shows the proportion of non-decent homes by region and age of HRP across England. For all regions except for Yorkshire and the Humber and the West Midlands, the proportion of non-decent homes is higher for households with an HRP aged 55 or over when compared with households with an HRP aged under 55. The total proportion of non-decent homes is lowest in the regions of London and the South East. The total proportion of non-decent homes in England is 16.6% (3,874,037 non decent homes out of 23,305,544 total homes), shown in Table 18, with this figure varying from 13%-19% by region.

Table 18: The proportion of non-decent homes in England by age of HRP

HRP Age	Proportion of homes that are non-decent (%)
Under 55	15.5
55 and over	17.9
National average	16.6

Base: All households
Source: English Housing Survey 2018/19

Figure 10: Proportion of non-decent homes by region and age of HRP

**Proportion of homes (%)**

Under 55   55 and over

Base: All households
Source: English Housing Survey 2018/19

5.4 Decent Homes by Tenure

Figure 11 shows the proportion of non-decent homes by tenure and age of HRP across England. The proportion of non-decent homes is higher for homes with an HRP aged over 55 in all tenures except for housing associations. The proportion is highest for 55 and over HRPs when the home is privately rented, with 30% of privately renting HRPs aged over 55 living in non-decent homes across England.

Figure 11: Proportion of non-decent homes by tenure and age of HRP

Proportion of homes (%)

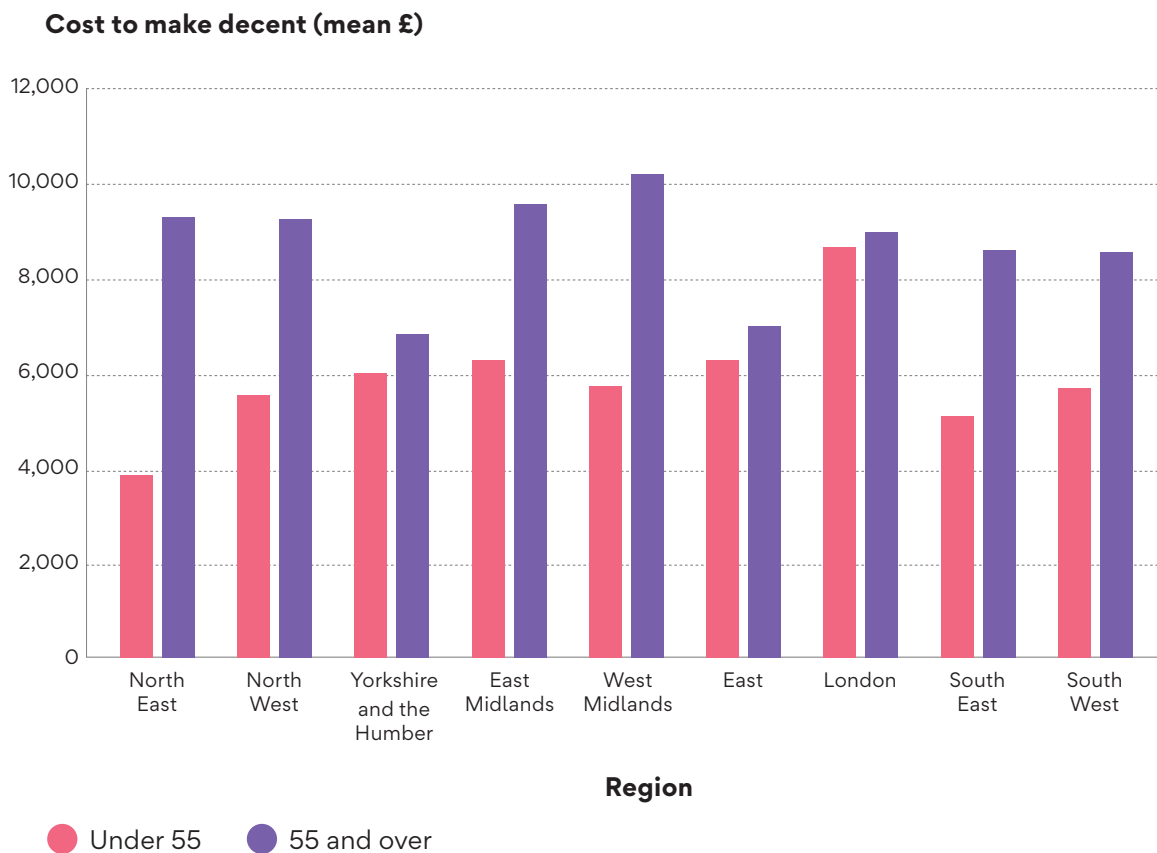● Under 55   ● 55 and over
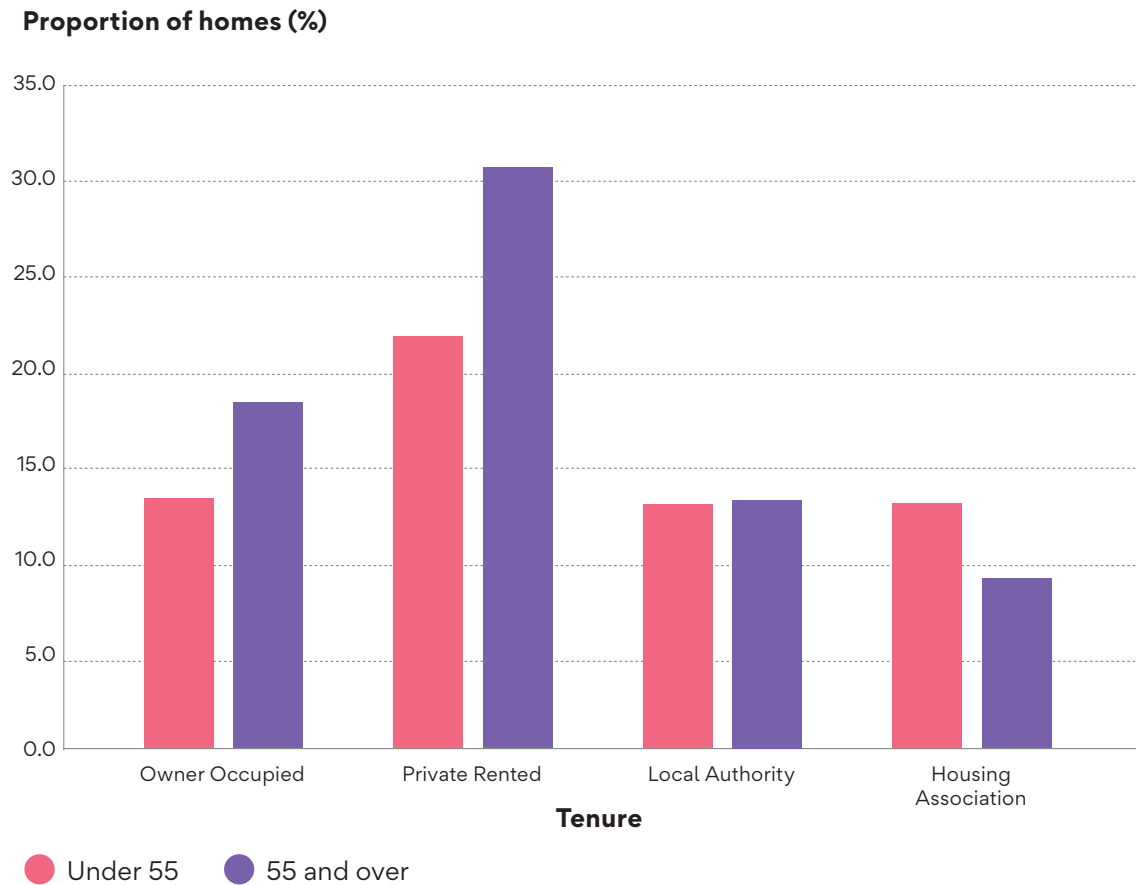
Base: All households
Source: English Housing Survey 2018/19

5.5 Cost to Make Decent (Mean)

For all regions in England, the average cost to make decent is higher for households with an HRP aged over 55, shown in Figure 12 and Table 19. The largest gap in the average (mean) cost to make decent within region by age of HRP was in the North East.

Literature suggests that the delay of installation of home improvements can reduce their costeffectiveness, if the adaptation arrives too late to help the occupant maintain their independence (Petersson et al, 2009; Powell et al, 2017).

Figure 12: Average cost (mean £) to make decent, by region and age of HRP

Cost to make decent (mean £)

Base: All households living in non-decent homes
Source: English Housing Survey 2018/19

Table 19: Average cost (mean £) to make decent, by region and age of HRP

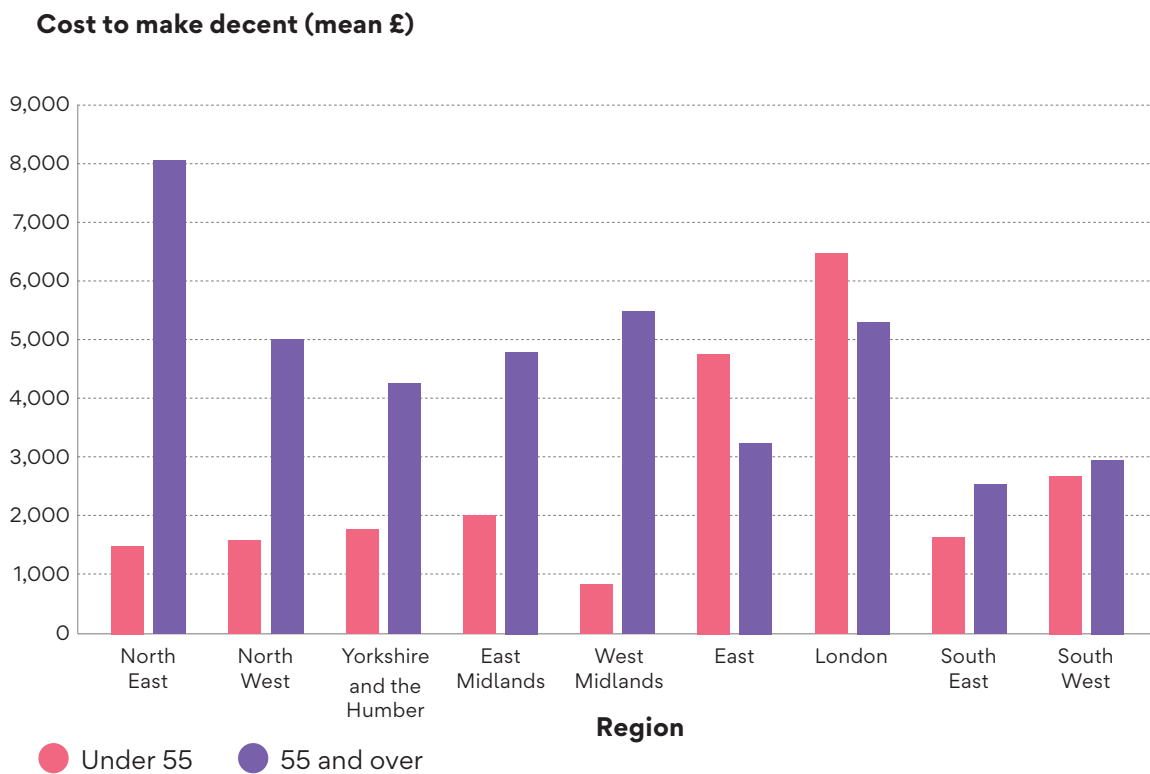| Region	Under 55	55 and over
North East	3,845	9,281
North West	5,522	9,243
Yorkshire and the Humber	6,037	6,860
East Midlands	6,283	9,584
West Midlands	5,733	10,230
East	6,289	6,998
London	8,664	8,985
South East	5,108	8,639
South West	5,700	8,538

Base: All households living in non-decent homes
Source: English Housing Survey 2018/19

5.6 Cost to Make Decent (Median)

Because the average (mean) value is skewed by the data distribution and outliers, the median value (50th percentile) may be considered a better measure of central tendency.

Figure 13 and Table 20 display the median cost to make decent across the regions of England. In the North, Yorkshire and the Humber, and the Midlands the median cost to make decent is significantly higher for households with an HRP aged 55 or over when compared with households with an HRP aged under 55. This trend is also observed, albeit to a lesser extent, in the South East and South West of England. By contrast, the median cost to make decent is lower for households with an HRP aged 55 years or over than it is for under 55s in London and East England.

Figure 13: Median (£) cost to make decent, by region and age of HRP.

Cost to make decent (mean £)

Base: All households living in non-decent homes
Source: English Housing Survey 2018/19

Table 20: Median (£) cost to make decent, by region and age of HRP

| Region	Under 55	55 and over
North East	1,475	8,020
North West	1,570	4,972
Yorkshire and the Humber	1,756	4,207
East Midlands	1,979	4,782
West Midlands	820	5,453
East	4,724	3,224
London	6,440	5,282
South East	1,613	2,530
South West	2,657	2,925

Base: All households living in non-decent homes
Source: English Housing Survey 2018/19

5.7 Cost to Make Decent – Percentiles

Figure 14 and Table 21 shows the average cost to make decent percentiles by region. On average across England, the cheapest 20% of homes can be made decent for an average cost of £758. This rises to an average of £15,008 if you want to make decent 80% of homes. Figure 14 shows this trend is largely reflected across all regions. However, in Yorkshire and the Humber, the East and the South West this range is narrower. By contrast, the range is wider in the Midlands, the North and London.

Figure 14: Cost to make decent, percentiles by region.
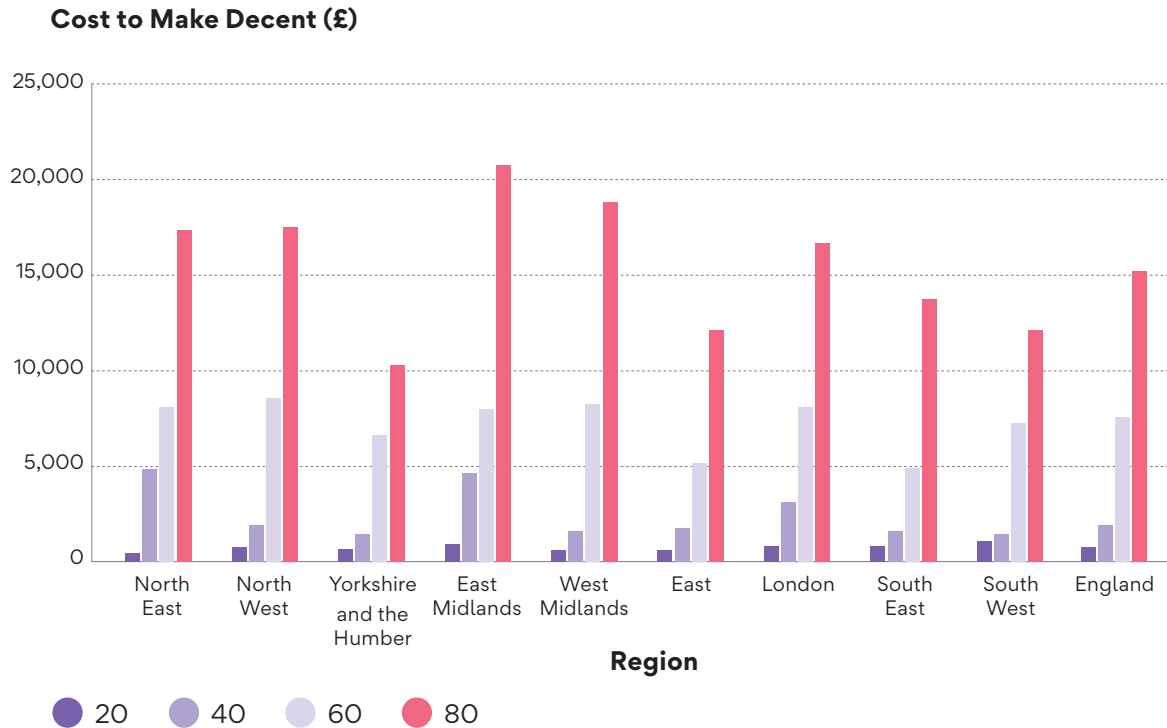
Cost to Make Decent (£)

Base: All households living in non-decent homes
Source: English Housing Survey 2018/19

Table 21: Cost to make decent percentiles, average across whole of England

Percentiles	Cost to make Decent (£)
20	758
40	1,873
60	7,540
80	15,008

Base: All households living in non-decent homes
Source: English Housing Survey 2018/19

6. Case Study Selection – Context

Section 6 provides contextual information on the areas where case studies selected for the evaluation are situated. The key metrics which have been selected for each case study are:

– Political council structure (correct as of 28th May 2024)

– Population (with population change)

– Population Median Age (with age changes that may signify an ageing population)

– Health (% of households who ranked their health as fair or worse)

– Income (% of population classified as income deprived)

– Quality of Housing (% of dwellings considered "non-decent")

Section 6 Outline:

Section 6.1 contains the averages for England for the above metrics.

Sections 6.2 to 6.9 contain the final shortlist of selected case study locations.

Sections 6.10 to 6.14 contain other areas considered during the scoping and selection phase.

Sections 6.12 to 6.14 contain other locations initially considered for a case study.

Section 6.15 details the references used to find the information contained in these contextual studies.

6.1 England Averages

– Population: 56,536,000 (2021), up 6.6% from 2011

– Population age: The median age across England is 40 as of the 2021 ONS census. From this same census, 18.5% of the population are aged 65+ and 37.9% are aged 50+. These are significant increases from the 2011 census, where 16.3% of the population where aged 65+ and 34.4 where aged 50+

– Health: 18.3% of English resident's health is recorded as "fair" or worse ("bad" or "very bad") (2021)

– Income: The range of income deprivation in England ranges from 25.1% of people being income-deprived in Knowsley and Middlesborough, down to just 4.2% of people being incomedeprived in Hart. (2019)

– Quality of housing: 16.7% of dwellings across England are considered 'non-decent' (2019)

6.2 Bristol

Bristol city council represents Bristol, the most populous city in the South-West region of England. The Green party currently has the highest representation in the local council holding 25 of the city's 70 seats, closely followed by Labour who hold 24. The city is currently under Labour leadership.

– Population: 472,500 (2021), up 10.3% from 2011

– Population age: The median age increased slightly from 33 in 2011 to 34 in 2021. 28.1% of residents are aged 50+, a very slight increase from 28% in 2011

– Health: 19.9% of residents recorded their health as "fair" or worse ("bad" or "very bad") in 2021

– Income: 14.1% of the population of Bristol are classified as income deprived as of 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Bristol is ranked 92nd most income-deprived

– Quality of housing: 16.2% of dwellings in Bristol are considered 'non-decent' as of 2019. This is close to the national average of 16.7%

6.3 Lancaster

Lancaster City Council incorporates the city of Lancaster and surrounding towns and villages including Morecambe and Heysham. The authority is in the North-West region of England. Labour currently maintain the highest representation of local councillors (24 of authorities 62), closely followed by the Green party who hold 21 seats.

– Population: 142,900 (2021), up 3.3% from 2011

– Population age: The median age in Lancaster remained at 40 across the last two censuses. This is in-line with the median for the whole of England. 40.2% of the Lancaster population are aged 50+, up from 36.6% in 2011 indicating an ageing population. This is higher than the national 37.9%.

– Health: 19.3% of Lancaster's residents described their health as "fair" or worse ("bad" or "very bad") in 2019. This is higher than the English average of 18.3%.

– Income: 12.9% of the population of Lancaster are classified as income deprived as of 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Lancaster is ranked 110th most income-deprived.

– Quality of housing: 23.5% of dwellings in Lancaster are considered 'non-decent' as of 2019. This is significantly above the English average of 16.7%

6.4 Leeds

Leeds City Council represents the city of Leeds, located in the Yorkshire and Humber region of England. The council is currently Labour majority, with the party holding 61 of the city's 99 seats.

– Population: 812,000 (2021), up 8% from 2011.

– Population age: The median age increased slightly from 35 in 2011 to 36 in 2021 in Leeds. 32.8% of residents were recorded as aged 50 or over in 2021, an increase from 30.8% in 2011, indicating an ageing population.

– Health: 19.2% of Leeds residents described their health as "fair" or worse ("bad" or "very bad") in 2021. This is higher than the national average of 18.3%.

– Income: 14.3% of the population of Leeds are classified as income deprived as of 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Leeds is ranked 86th most income-deprived.

– Quality of housing: 20.8% of dwellings in Leeds are considered 'non-decent' as of 2019. This is above the average for England of 16.7%.

6.5 Manchester

Manchester City Council represents the city of Manchester in the North-West region of England. Labour currently hold a majority in the city and are represented by 87 of the city's 96 councillors.

– Population: 551,900 (2021), up 9.7% from 2011.

– Population age: The median age of Manchester increased by two years between the last two censuses, from 29 to 31. The number of people aged 50 to 64 years rose by 27.4% within this timespan.

– Health: 24.6% of Manchester residents described their health as "fair" or worse ("bad" or "very bad") in 2021. This is higher than the national average of 18.3%.

– Income: 21.9% of the population of Manchester are classified as income deprived as of 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Manchester is ranked 8th most income deprived.

– Quality of housing: 19.2% of dwellings in Manchester are considered 'non-decent' as of 2019. This is higher than the national average of 16.7%.

6.6 Middlesbrough

Middlesborough Council is located in North-East England. Labour hold a slight majority and are represented by 25 of the authorities 46 councillors.

– Population: 143,900 (2021), up 4% from 2011.

– Population age: The median age of Middlesborough remained at 37 from 2011 to 2021. However, the proportion of residents aged 50+ rose from 32.7% in 2011 to 35.4% in 2021, indicating an ageing population.

– Health: 22.9% of Middlesbrough residents described their health as "fair" or worse ("bad" or "very bad") in 2021. This is higher than the national average of 18.3%.

– Income: 25.1% of the population of Middlesborough are classified as income deprived as of 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Middlesborough is ranked the most income deprived.

– Quality of housing: 15.3% of dwellings in Middlesborough are considered 'non-decent' as of 2019. This is below the national average of 16.7% and could indicate an effective home improvement service, especially when considering the level of income-deprivation within the local authority.

6.7 Norwich

Norwich City Council represents the city of Norwich and is located in the region of East England. Labour hold a current majority in the city, holding 23 of the city's 39 seats.

– Population: 143,900 (2021), up 8.6% from 2011.

– Population age: The median age in Norwich remained at 34 years between two most recent censuses, which is lower than the national average of 40. However, the number of people aged 50 to 64 years rose by 13.2%.

– Health: 22.1% of people in Norwich described their health as "fair" or worse ("bad" or "very bad") in 2021. This is higher than the national average of 18.3%.

– Income: 16.3% of the population of Norwich are classified as income deprived as of 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Norwich is ranked 52nd most income deprived.

– Quality of housing: 16.7% of dwellings in Norwich are considered 'non-decent' as of 2019. This is in-line with the national average.

6.8 Oxford

Oxford City Council is located in South-East England. Labour currently hold exactly half of 48 seats in the city

– Population: 162,000 (2021), up 6.7% from 2011.

– Population age: The median age increased by two years from 2011 to be 31 years in 2021. Although far below the national average Oxford represents an ageing population as the number of people aged between 50 and 64 years increased by 22.8% between the two most recent censuses.

– Health: 16.5% of people in Oxford described their health as "fair" or worse ("bad" or "very bad") in 2021.

– Income: 9.3% of the population of Oxford are classified as income deprived as of 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Oxford is ranked 200th most income-deprived.

– Quality of housing: 12.7% of dwellings in Oxford are considered 'non-decent' as of 2019. This is lower than the national average of 16.7%.

6.9 Somerset

Somerset is located in South-West England. Somerset is made up of 6 districts; North Somerset, Bath and North East Somerset, Sedgemore, Mendip, Somerset West and Taunton, and South Somerset. A summary of the districts is shown in Table 22. The Liberal Democrats currently hold a majority in Somerset, holding 61 of the counties 110 seats.

Table 22: Somerset case study area summary of all districts

	Somerset Areas						
	North Somerset	Bath and North East Somerset	Sedgemoor	Mendip	Somerset West and Taunton	South Somerset	Somerset Overall
Population	202600	193400	125300	116100	157400	172700	967500
Population Change (%)	7	9.9	9.4	6.2	8.7	7.1	8.0
Average Population Age (Median Years)	45	39	46	47	47	47	39-47
Average Population Age Change (Median Years)	1	-1	2	4	2	3	-1-4
Health (% Fair or Below)	17.2	15.4	18.2	16.4	17.1	16.8	15.4-18.2
Income (% income deprived)	10.1	7.9	11.7	9.9	10.4	9.5	7.9-11.7
Income-deprivation rank across the 316 local authorities in England	180	238	137	184	171	196	137-238
Quality of Housing (% non-decent)	13.8	15.8	18.2	18.7	18.6	20.7	13.8-20.7

– Population: 967,500 (2021), up 8% from 2011.

– Population age: The median age for all Somerset districts except for Bath and North East Somerset is higher than the English average of 40 years.

– Health: The proportion of residents in the 6 districts across Somerset who described their health as "fair" or worse ("bad" or "very bad") in 2021 ranges from 15.4%-18.2%. The scores across all districts are lower than the English average, which is 18.3%.

– Income: Incomed-deprivation across the 6 districts of Somerset ranges from 7.9%-11.7%. Of the 316 local authorities in England (excluding the Isles of Scilly), the districts in Somerset range from 137th to 238th most income-deprived.

– Quality of housing: Ranging across the 6 districts of Somerset, 13.8%-20.7% of dwellings are considered 'non-decent'. This range spans the English average of 16.7%.

6.10 Wolverhampton

Wolverhampton City Council is located in the West Midlands, North-West of Birmingham. Labour currently hold a majority in the city, possessing 47 of the city's 60 seats.

– Population: 263,700 (2021), up 5.7% from 2011.

– Population age: The median age of Wolverhampton is 38 as of 2021, up one year from 2011. The number of people aged 50 to 64 years rose by just over 7,400 (an increase of 18.0%), while the number of residents between 20 and 24 years fell by around 2,200 (12.2% decrease). This signifies an ageing population in Wolverhampton.

– Health: In 2021, 22.7% of people described their health as "fair" or worse ("bad" or "very bad"). This is higher than the English average of 18.3%.

– Income: In Wolverhampton in 2019, 21.1% of the population was income-deprived in 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Wolverhampton is ranked 11th most income deprived.

– Quality of housing: 16.7% of homes in Wolverhampton are considered non-decent. This is in line with the national average in 2019.

6.11 Carlisle

Carlisle City Council incorporates the city of Carlisle and surrounding towns and villages including Brampton and Longtown. The local authority is located in the North-West region of England. The Conservative party currently holds the most seats in the authority, represented by 19 of the 39 councillors, followed by Labour who are represented by 13.

– Population: 110,000 (2021), up 2.3% from 2011.

– Population age: The median age of Carlise residents increased from 42 in 2011 to 44 in 2021. This is higher than the national median of England of 40 years. 43.3% of Carlise's residents are aged 50+, higher than the national average of 37.9%. The number of people aged 65 to 74 years rose by 25.2%, further indicating an ageing population.

– Health: 18.9% of Carlise's residents described their health as "fair" or worse ("bad" or "very bad") in 2019. This is slightly higher than the English average of 18.3%.

– Income: 11.6% of the population of Carlisle are classified as income deprived as of 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Carlise is ranked 139th most income-deprived.

– Quality of housing: 21.6% of dwellings in Carlisle are considered 'non-decent' as of 2019. This is higher than the English average of 16.7%

6.12 Warwickshire

Warwickshire is located in the West Midlands region of England. Warwickshire comprises of 5 districts; North Warwickshire, Nuneaton and Bedworth, Rugby, Strafford and Warwick. A summary of the districts is shown in Table 23. The Conservatives currently maintain a majority in Warwickshire, holding 42 of the available 57 seats.

Table 23: Warwickshire case study area summary of all districts

	Warwickshire Areas					
	North Warwickshire	Nuneaton and Bedworth	Rugby	Stratford	Warwick	Warwickshire Overall
Population	65000	134200	114400	134700	148500	596800
Population Change (%)	4.9	7.1	14.3	11.8	7.8	9.2
Average Population Age (Median Years)	45	40	40	48	40	40-48
Average Population Age Change (Median Years)	2	0	0	2	1	0-2
Health (% Fair or Below)	18.6	20.7	16.8	14.2	14.9	16.8-20.7
Income (% income deprived)	9.7	13.6	8.7	6.8	7	6.8-13.6
Income-deprivation rank across the 316 local authorities in England	189	97	214	269	265	97-269
Quality of Housing (% non-decent)	19	14.7	17.9	23.5	18.3	14.7-23.5

– Population: 596,800 (2021), up 9.2% from 2011.

– Population age: The median age for all Warwickshire districts is at or above the English median of 40 years.

– Health: The proportion of residents in the 5 districts across Warwickshire who described their health as "fair" or worse ("bad" or "very bad") in 2021 ranges from 14.2%-20.7%. This range incorporates the English average of 18.3%.

– Income: Incomed-deprivation across the 5 districts of Warwickshire ranges from 6.8%-13.6%. Of the 316 local authorities in England (excluding the Isles of Scilly), the districts in Warwickshire range from 97th to 269th most income-deprived.

– Quality of housing: Ranging across the 5 districts of Warwickshire, 14.7%-23.37% of dwellings are considered 'non-decent'. The proportion of non-decent housing in 4 of the 5 districts in Warwickshire is above the average for England.

6.13 Brent

Brent is a local authority in North-West London. The council is currently under Labour majority control, who hold 47 of the authorities' 57 seats.

– Population: 339,800 (2021), up 9.2% from 2011.

– Population age: The median age increased from 32 in 2011 to 35 in 2021. Although this is below the national average of 40, the number of people aged 50 to 65 rose by 30.7%, while the number of residents between 25 and 34 fell by 8.8%. This signifies an ageing population.

– Health: 19% of residents' health recorded was as "fair" or worse ("bad" or "very bad") in 2021. This is slightly higher than the national average of 18.3%.

– Income: 15.5% of the population of Brent are classified as income deprived as of 2019. Of the 316 local authorities in England (excluding the Isles of Scilly), Brent is ranked 67th most incomedeprived.

– Quality of housing: 13.4% of dwellings in Brent are considered 'non-decent' as of 2019. This is lower than the national average of 16.7%.

6.14 North Yorkshire

North Yorkshire Council is located in the Yorkshire and Humber region of England. North Yorkshire is made up of 7 districts; Craven, Hambleton, Richmondshire, Ryedale, Selby, and the boroughs of Harrogate and Scarborough. A summary of the districts is shown in Table 24. The Conservatives hold a slight majority in North Yorkshire, with 47 of the available 90 seats.

Table 24: North Yorkshire case study area summary of all districts

	North Yorks Areas							
	Craven	**Hambleton**	**Richmondshire**	**Ryedale**	**Selby**	**Harrogate**	**Scarborough**	**North Yorks Overall**
Population	56900	90700	49800	54700	92000	162700	108700	615500
Population Change (%)	2.7	1.7	-4.2	5.7	10.2	3	-0.1	2.9
Average Population Age (Median Years)	50	50	46	50	44	47	50	44-50
Average Population Age Change (Median Years)	3	4	6	3	2	4	4	2-6
Health (% Fair or Below)	14.6	14.6	15	15.7	16.3	14	19.8	14-19.8
Income (% income deprived)	6.7	6.7	5.9	8.2	7.9	6.2	14.5	5.9-14.5
Income-deprivation rank across the 316 local authorities in England	275	274	293	227	235	287	80	80-293
Quality of Housing (% non-decent)	30	24.8	26.7	30.8	18.8	22.1	26.2	18.8-

– Population: 615,500 (2021), up 2.9% from 2011.

– Population age: The range of median population ages for the 7 North Yorkshire districts is 44-50 years. The median population age for all 7 districts is above the English average of 40 years.

– Health: The proportion of residents in the 7 districts across North Yorkshire who described their health as "fair" or worse ("bad" or "very bad") in 2021 ranges from 14-19.8%. For all districts except for Scarborough this statistic is below the English average of 18.3%.

– Income: Incomed-deprivation across the 7 districts of North Yorkshire ranges from 5.9%- 14.5%. Excluding Scarborough, this range narrows to 5.9%-8,2%. Of the 316 local authorities in England (excluding the Isles of Scilly), the 7 districts in North Yorkshire range from 80th to 293rd most income deprived. Excluding Scarborough, the remaining 6 districts in North Yorkshire rank in the top 90 for low income-deprivation

– Quality of housing: Ranging across the 7 districts of North Yorkshire, 18.8%-30.8% of dwellings are considered 'non-decent'. The proportion of non-decent housing for all 7 districts is above the average for England which sits at 16.7%

6.15 References

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